EXPRESSION OF EMOTION IN CHILDREN FROM FOUR ETHNIC GROUPS AND MOTHERS' CONCERNS

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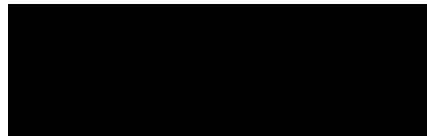
Declaration

Thesis title: Expression of emotion in children from four ethnic groups and mothers' concerns

This thesis contains no material which has been accepted for the award of any other degree of diploma in any university and to the best of this candidate's knowledge and belief, it contains no material previously published or written by another person except where due reference is made in the text of the thesis.

K M Jackson

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ABSTRACT

This study investigated the expression of emotion of Anglo-Australian, Indian, Hong Kong Chinese and Turkish children who were aged 5- to 8-years. These ethnic groups were chosen because Hofstede (1980) had shown that they held different culture level values and behaved in ways that reflected these differences. It was expected that children in the middle childhood age range would therefore also show differences in emotion-related behaviours. Emotions investigated were happiness, sadness, anger and anxiety, as perceived by the children's mothers.

The study consisted of two phases. The aim of Phase 1 was to develop a culturally relevant questionnaire about children's expression of emotion. Women from each ethnic group (n = 22) were interviewed, asked what situations made their child feel happy, sad, angry and anxious and how he/she expressed these emotions. A questionnaire, the Children's Emotions Questionnaire (CEQ), was developed using this information.

In Phase 2 three measures were trailed, amended and administered. In the trial the CEQ and two other measures, the Demographic data form and the Colindex (Chan, 1994), which measures Individualism-Collectivism, were completed by 17 women. Materials were presented in English and Turkish, the other migrant women preferring not to use their first language. These women's comments resulted in some amendments to measures.

In the final study, the amended versions of the three measures were used to test five hypotheses. The hypotheses predicted that (1) there would be between-group differences in expression of all emotions (2) there would be gender- and (3) age-related differences within groups (4) Indian, Hong Kong Chinese and Turkish children would show fewer behaviours when expressing negative emotions than Anglo-Australian children and (5) that immigrant mothers would be more concerned about their children's emotional expression than Anglo-Australian mothers. The final sample of 124 respondents included 37 Anglo-Australians, 16 Indians, 33 Hong Kong Chinese and 38 Turkish women.

Hypotheses 1, 2, 3 and 5 were tested using discriminant function analysis. With items as variables, Hypothesis 1 was confirmed for all four emotions. Hypotheses 2 and 3 were confirmed for some emotions for Anglo-Australians, Indian and Turks and for all four emotions for Hong Kong Chinese.

Although between-group differences in maternal concern did exist they were not in the direction predicted by Hypothesis 5. This last hypothesis was confirmed only for Indian and Hong Kong Chinese women's concern about expression of happiness. Hypothesis 4 was not confirmed.

Demographic differences between the ethnic groups contributed little towards explaining the between-groups variance found when testing Hypothesis 1. For Hypothesis 5, inclusion of Mother's Age increased the amount of variance explained by the first function derived in the discriminant function analysis.

Results were discussed in relation to western research, mother's culture of origin, and to acculturation.

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EXPRESSION OF EMOTION IN CHILDREN FROM FOUR ETHNIC GROUPS AND MOTHERS CONCERNS

OVERVIEW

This study is concerned with the emotional development of immigrant and locally-born children in Australia. It draws on research into the emotions in developmental psychology as investigated by first world researchers, on cross-cultural research into emotions and on studies of parental beliefs and practices as they relate to the emotions. More general literature about cultural values, beliefs and parenting practices in the four ethnic groups, Anglo-Australian, Indian, Hong Kong Chinese and Turkish, from which participants were selected, is also reported. Finally, issues relating to acculturation are considered since participants in the study were all resident in Australia.

This study had three major aims. The first of these was to discover whether there were between-ethnic-group differences in reported patterns of emotional expression among children. The second aim was to whether there were also within-ethnic-group differences in children's emotional expression which were associated with the gender or age of the child. Finally, the third aim was to investigate whether immigrant mothers were more concerned about this aspect of their children's development than were locally-born mothers.

Features of research into the developments in emotional expression, with specific reference to cross-cultural studies are outlined below. This is followed by a brief introduction to the present study and general outline of the structure of this report.

The Development of Emotional Expression

A growing body of Western research has looked at the development of emotions in children. This research has focused primarily on the way emotion is expressed facially, particularly the expression and recognition of four emotions, happiness, sadness anger and anxiety/fear. However, expression of emotion overall includes many more behaviours than just changes in facial expressions. Western researchers have also investigated children's vocal, verbal and, to a lesser degree, gestural and motor

expression of emotion. Most of the studies have looked at the emotion knowledge of white, middle-class Americans so that although there is now a significant body of information about children's emotional development questions remain about the extent to which findings can be generalised. This body of research is discussed in Chapters 1 and 2 in the present report.

As will be seen, the research literature has focused on the development of emotions in the early years, that is, infancy and the pre-school period. Both precursors of emotion and emotion itself have been investigated. Studies of physiological precursors and aspects of the mother-child relationship such as the quality of attachment are cited in the present report. These studies show that both innate characteristics and learned responses in related areas of development influence the development of emotion.

Researchers investigating emotional development itself have primarily taken a learning perspective. They have looked at ages at which children can recognise, label and model facial expressions for different emotions, primarily happiness, sadness, anger and anxiety/fear, emotions which were also investigated in the present study. Mother-child and, rarely, father-child discussion about emotion-related experiences have been investigated with pre-school children as has the moderation of emotional expression through use of various cognitive and behavioural strategies later in childhood. Gender- and age-related differences in knowledge about and expression of emotion have been reported. These are associated with variations in parental teaching about emotions according to the child's age and gender. The studies reported in Chapters 1 and 2 suggest that changes in knowledge about emotion take place over a longer period than just the first 5 years or so but knowledge of older children's emotion-related behaviours is limited. The present study therefore moves outside the period of early childhood, looking at expression of emotion by children who are in the age range 5- to 8-years.

While much of the work discussed in the first two chapters of the present study has been reported from a broad developmental framework rather than from any specific theoretical perspective a few investigators have attempted to describe how learning about emotion takes place. These writers have explained that emotion learning is an outcome of a bi-directional process. Parental modelling and reinforcement of certain

behaviours influences and is influenced by characteristics of the child, who learns both vicariously, by observation of others, and socially, during interactions. The theorists, whose work is outlined in Chapter 1, note that it is difficult to explain clearly just what produces some learning outcomes, largely because emotions occur in often complex social situations.

Theories about what constitutes emotional competence are held by parents of all ethnic groups. These theories, known as folk theories or ethnotheories, are of particular interest to the present study in which parents reports about their children's expression of emotion were gathered. Parents' ethnotheories about competence determine what they attempt to teach their children. Ethnotheories are discussed along with more scientific theories in Chapter 1. Evidence that the women from the four ethnic groups in the study were likely to have different general ideas about children, and specific theories about emotions is discussed in Chapter 4.

Information about child development in cultures other than those in the West where a great deal of psychological research has been done draws on both cross-cultural psychological research and on more general material about cultural values and parental practices and beliefs. Few psychological studies have investigated development of emotions cross-culturally. This reflects the limited amount of cross-cultural research in child development anywhere rather than a lack of interest in emotions in particular. Cross-cultural studies to date have typically compared the temperament, attachment and emotion knowledge of non-Western infants and pre-schoolers with that of infants and pre-schoolers in the West, usually the United States of America. Results do not necessarily confirm the Western findings, raising questions both about the cross-cultural relevance of some questionnaires and of research methodologies. This cross-cultural research is outlined in Chapter 3.

Indirect information about parenting practices and goals for emotional development comes from literature about traditional values and beliefs. Goals are also likely to be influenced by the extent to which each culture is group-oriented or collectivist rather than individualistic. In Chapter 4, where this literature is discussed, similarities and differences in goals for development are outlined with specific reference to the beliefs

and practices of Anglo-Australian, Indian, Hong Kong Chinese and Turkish parents. Any specific information about goals for emotional development in these ethnic groups is naturally included in this chapter.

Traditional beliefs in many cultures have undergone rapid change in the last 30 years. This is particularly true in developing countries from whence the migrant mothers in the present study came. Evidence suggesting that changes in the cultures of the four ethnic groups are associated with changes in parental beliefs and practices is presented in Chapter 4. A special form of change to which immigrant women in the present study had been exposed is that change which comes about during the process of acculturation. Acculturation may be a source of stress as is also pointed out in Chapter 4. The possibility that one indicator of acculturative stress might be levels of concern about emotional development was explored in the present study.

The Study

The study described in this report looked at the emotional development of 5- to 8-year old children from different ethnic/cultural backgrounds residing in Australia. Although all children were growing up in Australia only those whose mothers were Anglo-Australian lived in a family where goals of child-rearing were likely to reflect those of the majority culture. Mothers in the three immigrant groups, Indian, Hong Kong Chinese and Turkish, were all first generation migrants and had lived in this country less than 6 years on average. The rationale for the decision to select a sample from these four ethnic groups is presented in Chapter 4 and centres around Hofstede's (1980) culture level values, socioeconomic and population density concerns. Hong Kong Chinese were selected rather than Chinese generally because there is some evidence of regional differences in aspects of Chinese child-rearing (Wu, 1996). Selection of migrants from Turkey and India is not based on region of origin so it was not possible to further refine selection of samples from these countries.

Immigrant mothers' beliefs about goals of child-rearing, their values and behaviours had been formed in a culture other than that of the majority culture in Australia. But, as is shown in Chapter 4, there were also marked differences between the cultures of origin of the three acculturating, immigrant groups so that goals for child-rearing were also

likely to be different. These between-group differences led to the prediction that there would be differences in the ways in which children from the various ethnic groups expressed the four emotions under investigation, happiness, sadness, anger and anxiety.

The gender and age differences reported in Western psychological studies, together with information about the cultures of the four ethnic groups from which women were drawn to participate in the present study also suggested that there would be within-group gender and age differences in emotional expression. These differences were therefore also predicted.

Collectivism is associated with teaching of emotional control in the interests of group harmony. But individualist cultures place less emphasis on group harmony. This led to the prediction that Anglo-Australian children would show a greater range of behaviours to express each emotion than children in immigrant families. Finally, because of the stresses associated with acculturation it was expected that immigrant mothers would be more concerned about their children's expression of emotion than Anglo-Australian mothers. Interviews and questionnaires were used to discover whether mothers of different ethnic groups perceived their children as showing emotions in different ways and whether immigrant mothers worried more about their children's emotional expression than Anglo-Australian mothers.

As can be seen in Chapter 7, where results are reported, the situation was more complex than expected. Results showed within-group gender- and age-related differences in expression of some emotions among Anglo-Australian, Indian and Turkish children while Hong Kong Chinese women consistently reported such differences. When between-ethnic-group comparisons were made differences were found for all emotions. The Hong Kong Chinese women consistently reported high frequencies of occurrence of emotion-related behaviours and were also consistently most concerned about these behaviours. Indian women reported low frequencies of behaviours and low levels of concern while Anglo-Australian and Turkish women showed more variable patterns. Because information was obtained from the children's mothers, results might have been influenced by cultural differences in maternal perceptiveness and reporting. Overall, the

results provide support for some of the American and British findings while at the same time challenging global statements which have been made about emotional development. These latter conclusions are discussed in the final part of the report.

Summary

In summary, the structure of this report is as follows: Chapter 1 outlines theories about emotional development, examines precursors of emotion and what children learn about the facial, vocal, verbal and motor expression of emotion. Information about how this learning is shaped is also discussed. In Chapter 2 children's learning about strategies for management of emotion and its expression is outlined.

The next two chapters introduce information from the perspective of cultures other than those of the first world. In Chapter 3 the few cross-cultural studies which have investigated emotional development are presented, while in Chapter 4 general issues in child socialisation, the impact of culture change and immigration on parents is discussed with the focus narrowing to the Anglo-Australian, Indian, Chinese (where possible to Hong Kong Chinese specifically) and Turkish ethnic groups. This chapter also includes the hypotheses.

Chapters 5 to 7 detail the actual research undertaken. In Chapter 5 the special issues which have to be considered when interviewing and developing questionnaires are discussed before data gathering using interviews and preparation of a questionnaire based on interview data are outlined. Trialing, modification and use of the final set of measures are described in Chapter 6 and in Chapter 7 results of analyses are presented. The final chapter, Chapter 8, refers back to both the Western research and the literature about values in non-Western cultures and concludes that the behaviours seen by mothers are consistent with those of their culture. For immigrant women the influence of the culture of origin remains dominant. Appendices detailing information additional to the main focus of the study are also provided.

CHAPTER 1: THE DEVELOPMENT OF EMOTION

Introduction

The study of emotion has long been considered a legitimate task for psychologists. Over 100 years ago an article by William James entitled "What is emotion?" discussed issues raised by consideration of this hypothetical construct. James (1884, as cited in Ortony, Clore & Collins, 1988) believed that emotions involved "distinct bodily expression" along with a greater or lesser cognitive component. The complexity of the construct has made it difficult to define and the debate is such that Strongman (1990) was able to list 10 categories of emotion theories. He included one odd category which he referred to as "Ambitious theories" and which listed those theories that were unusual in their approach.

In 1984 K. R. Scherer stated that there was an emerging consensus about the components of emotion. It is clear that most modern emotion theorists recognise the presence of physiological activation, cognitive appraisal, a motivating effect, and motor expression as well as the fact that there is also a significant subjective aspect to any emotional experience. Within the very general consensus, however, lies a great deal of debate as to the exact nature of each component, its centrality in the experience and expression of emotion and its relationship to other components (e.g., Ekman, 1984, 1992; Frijda, 1986; Izard, 1992; Ortony & Turner, 1990; Plutchik, 1984; Tomkins, 1984). Modern emotion researchers and theorists typically also acknowledge the place of learning in the emotional experience but most are not particularly concerned with how learning takes place or what has been learned and as has been noted "there are few explicit models for the development of emotion" (Saarni, 1990, p.124).

Formal Theory About Emotional Development

The small number of investigators (e.g., S. L. Gordon, 1989; Saarni, 1990; Sroufe, 1984) who have looked at emotion in infancy and childhood have addressed the question of emotional development. They agree, in general, that it consists of changes in biologically determined affect systems from the emotion precursors of infancy to the forms of emotional behaviour which are seen in childhood and later in adulthood.

Sroufe (1984) states that such change involves an increasing capacity on the part of the infant to modulate both levels of arousal and the nature of the affective response. He postulates three basic systems, which he called rage-anger, wariness-fear and pleasure-joy. Like other developmental theorists he recognises that the capacity for these most basic responses is present at birth.

Various alternative views propose a two dimensional basis for emotions but emphasise different features of innate responsiveness. For example, J. A. Russell (1989) believes that emotional capacity is based on the two dimensions of arousal-sleepiness and pleasure-displeasure, which are present at birth. According to Russell's view combinations of these dimensions are subsequently labelled, leading to increasing differentiation. For example, the subjective experience of fear might be a combination of the experience of unpleasantness and high arousal. On the other hand, Plutchik (1984) discusses what he refers to as the positive and negative polarities of arousal while for Fox (1991) the two critical dimensions are innate action tendencies of approach and withdrawal which become expressions of emotion through patterns of reinforcement.

Developmental theorists typically also explain the sequence and pattern of change in emotional experience and expression seen in children. Sroufe (1984), for example, states that the endogenous smile is indicative of the neonate's experience along the pleasure-joy dimension. He states that development of this dimension results in the experience of actual pleasure and subsequently delight, in the early months. At around 7 months joy is experienced, with feelings of pride and love developing by age 36 months. According to Sroufe each basic system follows its own developmental timetable over the first 3 years. Besides developments in the pleasure-joy dimension the child also begins to show wariness at around 4 months, actual fear emerges by about 9 months followed by anxiety at about 12 months. Initial distress at various forms of restraint become genuine anger at 7 months and defiance at around 18 months. Progress from one level of emotional experience to another requires physiological change permitting regulation of bodily response, regulation of tension, and formation of a quality attachment relationship among other developments, both physical and social.

Other authors, such as J. A. Russell (1989), have focused more on how meaning is attached to the physiological responses which accompany a subjective emotional experience. J. A. Russell postulated that infants first learn to discriminate between different gestures and changes in face and voice of caregivers. Soon after this skill is established infants acquire the capacity to discriminate between classes of expressions, achieving this latter skill between the ages of about 4 to 8 months. By about 10 months infants begin to attribute meaning to the different classes of emotional expression. This knowledge is shown by the child's use of its mother as a social referent for appropriate emotion. At about this time the infant also learns to associate pairs of meaningful elements, for example, the infant behaviour which results in a spilt drink becomes associated with unpleasant high arousal on the part of the mother. Having established a number of paired associations the child becomes able to string together sequences of behaviours, expressions, situations and words. These remembered sequences permit the formation of more generalised scripts for emotion-eliciting situations and for the appropriate affective response to these situations.

J. A. Russell (1989) acknowledges that this pattern of development also includes within-phase changes leading progressively towards the later skill level. Like others, (e.g., Shaver, Schwartz, Kirson & O'Connor, 1987), he believes that emotion concepts form fuzzy sets, rather than sets with clearly defined paramenters. He also believes that variations in order of acquisition of skills and in the complexity of scripts exist and may remain throughout life. Since he is interested in cross-cultural aspects of emotion and meaning he further notes that the children learn the scripts appropriate to their culture.
While such research has been informative it carries the risk, as Harris (1995) has pointed out, that researchers will ignore the fact that children have emotional experiences long before they have concepts or language to explain them.

Sroufe's (1984) and J. A. Russell's (1989) hypotheses about the sequencing and refinement of emotion experience and knowledge do not attempt to tell how changes in emotion knowledge are brought about. Buck (1983) has addressed the issue in his discussion of the types of learning and reinforcement which are available to young children in the context of emotion. Buck separates emotion-related behaviours into instrumental and expressive behaviours, physiological responses and subjective

experiencing. He explains that learning about appropriate instrumental behaviours for each emotion is likely to occur because the child has opportunities to observe others showing these instrumental behaviours and learns vicariously, by imitation and by social reinforcement. Children are usually less aware of their own expressive behaviours but are able to witness the expressions of others and to associate these with differing emotional states. Their own expressive behaviour may also be shaped through social reinforcement. Learning in the area of physiological responses and the subjective experience of emotion is less easily explained. However, Buck notes that physiological responses have been shown in research to be modifiable as a result of conditioning processes. Such modification may occur as a result of vicarious learning as well as more direct teaching on the part of adults. Subjective experiences of emotion gain meaning and labels as a result of discussion about them either in the presence of the child or directly with the child.

S. L. Gordon (1989) and Saarni (1990) both list skills shown by emotionally competent adults and discuss the kinds of experiences which might promote acquisition of such skills. Gordon is concerned with variation in the extent to which children are exposed to situations in which they might observe emotion-related behaviours of others. She notes that differential exposure to such behaviour will result in differential competence. Timing of exposure, diversity of models, and constraints on what and how models express emotions are all identified as being likely to influence children's learning about how to express their own emotions.

Saarni's (1990) list of components of emotional competence is much more detailed. Skills range from having an awareness of one's own emotional experience and awareness of emotion in others, through the capacity to take account of others' emotions and respond accordingly, to the capacity for emotional immediacy and reciprocity which is a requirement for intimacy. In all she lists a total of 11 skills, for each of which she cites research evidence indicative of growth in knowledge during childhood. Knowledge growth, evidenced through behaviour, begins in infancy for some skills, but is still continuing at around the age of 13 - 14 for the most complex skills.

Papadopoulou (1995) agrees that learning about emotion takes place during childhood. He takes what has been referred to as a social constructivist view. This approach is derived from the work of the Russian educator, Lev Vygotsky (b.1896 - d.1934). Vygotsky believed that all learning occurred in a sociocultural context, with input from expert older persons helping learners to make the necessary links between their current knowledge and the new knowledge which they are in the process of acquiring. Initially the experts provide many cues as to the immediate next phase of learning, helping the children to acquire knowledge which is just beyond their current level of expertise, in what has been called the zone of proximal development. After supported practice children then develop the capacity to apply the newly acquired skill independently. Although Vygotsky was particularly interested in cognitive tasks Papadopoulou believes that learning about emotions occurs in this social context in a similar way.

Another approach to emotional development has tested the thesis that children's expression of emotion is the same as that of adults. Studies from this perspective have shown that even where overt behavioural responses are similar to those of adults they may not be the same. For example, Matias and Cohn (1993) and Oster, Hegley and Nagel (1992) have tested Izard's (1977) differential emotions theory in an attempt to discover whether infants' facial expressions were, in fact, the same as those of adults, as is claimed. These studies are important because very few studies have tested theories about adult behaviours against the behaviours of children. Matias and Cohn (1993) used an adaptation of the Maximally Discriminative Facial Coding System (MAX) (Izard, 1979) when looking at infants' expression. (MAX designates different combinations of facial muscle movements as showing the different emotions: interest, joy, surprise, sadness, anger, disgust, contempt and fear, plus the facial expression associated with pain.) These researchers reported assessing the facial expressions of 20 infants with a mean age of 61.6 days and failing to find confirmation of Izard's claims, especially for negative emotions. Oster, Hegley and Nagel obtained data by training naive observers to use the MAX scale to assess the expressions shown by infants in 22 monochromatic slides. Like Matias and Cohn, they were unable to conclude that infant expressions, especially negative ones could be coded as had been claimed by Izard.

Charlesworth and Kreutzer (1973) suggested that children might be more emotionally expressive than adults and show emotion in ways which are less differentiated and more motoric. Similarly, Hesse and Cichetti (1982) have argued that there may still be differences between older children and adults in the types of emotion expressed, in the way the same emotion is expressed, and even in the physiological correlates of emotion. A little evidence supports this position (e.g., Shields & Padawer, 1984) but few investigators have considered this possibility to date.

In conclusion, it can be seen that despite some different views there is general agreement among developmental psychologists about emotions. They believe that although infants react to what adults identify as emotion-eliciting stimuli from as early as a few hours after birth (Davidson, 1984) their responses differ in several ways from those of older children and adults. Very young children's internal responses to emotion-eliciting stimuli are believed by most theorists to consist of two or three components, while overt behavioural responses are also restricted in range. The difference between this type of generalised responsiveness and the reactions of adults exposed to similar emotion-eliciting stimuli is recognised as being immense and change towards adult emotional experience and expression may be quite gradual. Such gradual change is believed to occur as a result of learning.

Lay Theory About Development of Emotion

Lay people have commonsense knowledge about the development and maintenance of their culture and society. Such knowledge is not scientific, but is powerful because it is implicit and procedural rather than explicit, formalised and declarative (Sigel & Kim, 1996). This type of knowledge is known as folk theory, naive theory or ethnotheory. Ethnotheory, as it relates to children, includes beliefs that parents have about being a parent, about child development and child-rearing (Shaver et al., 1987; K. D. Smith, 1995). These beliefs are referred to variously as parental beliefs (Sigel & Kim, 1996), parents' cultural beliefs (Harkness & Super, 1996) or parental ethnotheories (Super et al., 1996).

Parental beliefs are generalisations that influence parenting behaviour and are influenced by the responses of their child to that behaviour (Harkness, Super & Keefer,

1992). These beliefs tell parents what children are like and what they can be expected to do (Valsiner & Litvinovic, 1996) and almost certainly include beliefs about children's experience and expression of emotion such as "Boys express anger physically" or "Girls express sadness by crying". They include timetables for emotional control (e.g., Goodnow, Cashmore, Cotton & Knight, 1984; Hess, Kashiwagi, Azuma, Price & Dickson, 1980) and probably incorporate ideas about how children learn about emotions, and what consequences should follow culturally undesirable expression of emotion. Such beliefs underpin socialisation practices used by parents with their offspring throughout childhood (Super et al, 1996).

Lay theories are relevant to the study of emotion although currently not widely investigated. Such theories are important for the current research which is concerned with mothers' perceptions of their children's emotional expression. Information about the parental beliefs of women in cultures of interest in the present study is difficult to obtain, but the information about parenting practices and goals that is available is reported in Chapter 3. This information provides rather indirect evidence for parental beliefs as it has had to be gleaned from sources focusing on more general features of culture. However, using such information avoids the problem identified by both Parrott (1995) and Briggs (1995) who have pointed out that failure to address ethnotheories weakens one's understanding of emotion and progressively results in loss of connection between everyday reality of emotional experience and research.

Conclusion

Ethnotheory about emotional development and the formal theories of psychologists show some overlap. Developmental psychologists working in the field of emotion recognise the innate and learned aspects of child development. Parents also know some things about both innate and learned components of emotion, probably more than has previously been recognised. Such knowledge may, however, be of the common sense type and may therefore differ in content and structure from knowledge gathered using a more scientific approach.

PRECURSORS OF EMOTION SOCIALISATION

Theory states that emotional expressiveness is influenced by human physiology, temperament and general socialisation practices. It is necessary, then, to consider emotional development from these perspectives. What does research tell us about both biological and social precursors of emotion?

Physiology

Several studies of emotion in the infant and young child have included measures of physiological responses. Much of this work has involved the study of autonomic nervous system (ANS) responses, notably heart rate and skin conductance when the child was distressed (e.g., Calkins, & Fox, 1992; Kagan & Snidman, 1991). However, Fox and Davidson (1986) and Fox (1991), who have used electroencephalograms (EEG's) to measure cortical activity during emotional responses, have argued that more information is required about central nervous system (CNS) involvement in emotion since the CNS is central to experience of emotion. ANS activity is more than likely to occur as a correlate of some change in the CNS. Studies in this area are made more complex by the fact that there is differential maturity in left and right hemispheres during early life (Fox, 1991), such developmental difference acting as a possible confound in research if not taken into account.

Fox and Davidson (1986) report finding that CNS responsiveness to emotional stimuli seems to be rather generalised in the early months of life but that by the age of one year infants are showing a similar pattern of response to positive and negative affect to that shown by adults. They show lateralisation of response with greater left anterior region activity when experiencing positive emotion and greater right anterior activity when experiencing negative emotion. These researchers have concluded that such lateralisation may be related to action tendencies, that is, the child's preparation for approach or withdrawal, rather than to emotion per se. Others have reported findings suggesting that there is an additional generalised CNS response to emotion stimuli which may be related to the intensity of the response (Dawson, 1994). While confirming the need for further studies of young infants' responses to emotion-eliciting stimuli Fox (1991) commented that the functioning of the CNS itself may be influenced by the

infant's experiences. He noted that studies of activity in the maturing CNS will not themselves explain the range of emotional expression which is seen in older children and adults.

Temperament

Information about constitutional patterns of emotional responsiveness in infants and young children arises out of studies of temperament. Temperament has been defined as "the behavioral style of the individual child... the characteristic tempo, rhythmicity, adaptability, energy expenditure, mood and focus of attention of a child, independently of the content of any specific behaviour" (Thomas, Chess, & Birch, 1968). Studies in this area have been based mainly on parental reports, occasionally supported by more objective records obtained by trained observers. Correlations between mothers' and other observers' (e.g., pre-school teachers) descriptions of temperament are moderate at best (Field & Greenberg, 1982; Northam, Prior, Sanson, & Oberklaid, 1987).

Many of these studies have developed from the work by Thomas et al. (1968) in which the investigators assessed child characteristics along nine dimensions intuitively chosen and designated Activity (level), Mood (prevalence of positive or negative mood), Intensity (of response) Threshold (to respond), Persistence, Approach or Withdrawal (tendency when faced with new stimuli), Adaptability (over time and to new experiences), Distractability (or ease of soothing) and Rhythmicity (or regularity of biological functions). Studies of temperament, using parent reports on children up to 12 years old, have yielded as many as six temperament factors (Pedlow, Sanson, Prior, & Oberklaid, 1993; Sanson, Smart, Prior, Oberklaid, & Pedlow, 1994) or as few as three (Buss & Plomin, 1984). Where more factors are found those with the highest loadings tend to overlap with those found in studies from which fewer factors can be derived. For example Sanson, Prior, Garino, Oberklaid and Sewell's (1987) study yielded a factor which they named Approach and which accounted for 28.3% of the variance. This factor shows quite a lot of overlap with a factor often referred to as Sociability (Prior, 1992).

Prior (1992) states that there are three temperament factors about which there is general consensus, these being Sociability, Activity and Emotionality. She further states that these aspects of temperament also appear to have the highest heritability although estimates of heritability remain modest. This is confirmed by Bornstein, Gaughran and Homel (1986), who discuss a number of studies showing concordance rates for monozygotic (MZ) twins, for activity level and response to novel stimuli, (referred to by some as a fear response) which are typically in the range of 0.4 to 0.5. Dizygotic (DZ) twin concordances are typically significantly lower. Matheny's (1980, 1983) longitudinal studies note change in temperament over the first two years of life, but with MZ twins showing greater synchrony of change. He reports that concordance rates for MZ twins, at .23 to .53, remained significantly higher than those for DZ twins whose concordance rates ranged from .06 to .21.

This low to moderate heritability for temperament means temperament alone is unlikely to explain differences in emotional expressiveness. Instead, it is probable that the influence of inherited propensities will occur through their impact on caretaker-child interaction. This probability has been widely recognised by investigators in the field of temperament (Prior, 1992). Numerous studies (e.g., Kochanska, 1995; Susman-Stillman, Kalkose, Egeland & Waldman, 1996; Wachs & Desai, 1993), with samples ranging from about 50 to 250 infants, have been done. Some or all of the infants in each study are temperamentally "difficult", that is they show characteristics such as prevailing negative mood, irritability and proneness to distress, in addition to being difficult to soothe. The studies consistently show that it is the interaction of infant temperament with mothers' sensitivity and responsiveness which determines attachment outcomes at the age of 12 months. "Difficult" children with good attachment are emotionally more stable than those who are described as insecurely attached, and show less fear and anger.

Later social-emotional behaviours also vary according to bidirectional mother-child influences (Bell, 1968) in the early years (Bornstein, 1995). One of these influences is the child's temperament. Studies by Bates and Bayles (1988) and by Maziade et al. (1989, 1990) show that children with difficult temperament who have met or elicited unresponsive mothering in the first year are more likely to show behaviour problems by

6 or 7 years of age. Although emotional components of such behaviour difficulties are not the focus these studies the children are described as showing either anxiety and fearfulness or acting out behaviours. By definition, the latter include the aggressive acts which are typical of many angry children.

Thus, it is evident that although temperament predisposes infants to greater or lesser emotionality, temperament itself does not explain the differences that arise in emotional expression. Instead, the moderation of genetic influences through experience contributes from a very early age to the ways in which children express their emotions.

Family and Community

Child socialisation takes place within the context of the family and the wider community. The goal of socialisation is to produce a new generation who have the competencies required in the particular cultural setting (Ogbu, 1981; Kagitcibasi, 1996) although parents may not be able to elucidate their goals consciously (LeVine, 1974). But the study of how such socialisation occurs remains limited at present partly because of the complexities of studying children in their environments and partly because of the relatively recent recognition that child development is an interactive process, not just a mechanistic one or one that requires only knowledge of organismic or constitutional features (Kagitcibasi, 1992; Sameroff & Feil, 1985).

Possible frameworks for research have been suggested by Super and Harkness (1981, 1986, 1994) and by Bronfenbrenner (1979, 1988). Super and Harkness, for example, refer to the child's "developmental niche". Within this niche each child experiences his or her development in ways which are influenced by the psychology of the caregiver, their approach to child care and child-rearing, their values, attitudes and goals, and the physical and social setting in which the child is being raised. Only when the child is seen in context can a full understanding of development be reached.

Bronfenbrenner (1979, 1988), in a more hierarchical framework describing sources of influence on child development, details possible levels of interaction between child, family and community, all of which have implications for child development. He identifies four interrelated systems, components of which influence the child more or

less directly. The first and obviously closest to each child is called the microsystem. This system includes children in the family. Slightly more distant is the mesosystem which includes, for example, children in school, that is, children are directly involved at this level but involvement is outside the immediate family. Further away is the exosystem in which children themselves are only indirectly involved. An example of an agency in the exosystem is the parents' workplace. This is relevant to child development because occupational status of parents has been shown to be closely related to children's developmental outcomes even although they are not directly involved at this level (Kohn, 1969). The largest and most remote system is the macrosystem, the overarching culture in which children and their families live, and which therefore encapsulates all other systems. Bronfenbrenner argues that child development cannot be fully understood unless the ways in which sub-components of each of these systems influence socialisation and how they interact with each other are understood. He acknowledges that historical time is an additional influence on child development.

A number of studies have looked at the child in the context of the family, with a focus on parental beliefs about child development. Parental beliefs about a wide range of aspects of child development (e.g., children's food intake, sleep patterns, mother-child communication) have been shown to vary according to maternal education (Engle, Zeitlin, Medrano & Garcia, 1996; LeVine, Miller, Richman & LeVine, 1996), culture (New & Richman, 1996; Rosenthal & Gold, 1989) and socioeconomic status (Kohn, 1969; L. A. Bond, Belensky, Weinstock & Cook, 1996). Unfortunately, parental beliefs about emotional development have not formed the focus of research to date although some work in Japan has suggested that parental beliefs about a precursor, temperament, vary culturally (Shwalb, Shwalb, & Shoji, 1996). Research from some other perspectives also shows that parents do hold beliefs about expression of emotion which may influence their behaviour. For example, many believe boys and girls express their emotions differently from birth (Condry & Condry, 1976; Haviland, 1977). Some believe that even very young infants show complex emotions, such as contempt, as early as 2 to 4 months (Emde, 1984).

Taking another approach, Sameroff and Feil (1985) have considered the ways in which parents may think about their child, describing four levels of complexity and

abstractness ranging from symbiotic, through categorical and compensating to perspectivistic thinking. Parents operating at the symbiotic level are nonreflective, recognising neither that development exists, nor that there are certain antecedents which precede it. At the next level, parents think that some determinant of development is the only cause for the child's behaviour. Parents thinking categorically may apply the label "This is a good child" soon after the infant's birth and may maintain that belief through the child's tantrums and other undesirable behaviours. Obviously the developmental outcome is likely to be positive in this case. But the application of the label "bad child" may have long term deleterious effects. The compensating framework acknowledges that there is more than one cause for development and parents using this framework do not apply fixed labels to their child. Such parents accept their normally developing child but may not be able to cope with atypical development. Finally, parents using a perspectivistic framework accommodate their children as they are, in the context in which they are developing. Developmental outcomes for the child may depend on the extent to which he or she meets the parents' expectations associated with the level at which thinking about the child occurs. Sameroff and Feil report research showing that the preferred framework for thinking about children correlates with socio-economic status and intelligence. Low socioeconomic status (SES) mothers are more likely than better educated, higher SES mothers to use symbiotic thinking. These authors have tested their approach with 483 parents in England and the United States of America and claim to find support for the universality of this model.

Events which influence nations at the broadest level, that is, at Bronfenbrenner's (1988) macrosystems level, have occasionally also been shown to alter parenting practices. A good example of this is Elder and Caspi's (1988) detailed longitudinal study which looked at the impact of the Great Depression of the 1930's on parenting practices and personality development in children in two communities in the United States of America. When men became unemployed and women took up paid work outside the home during the Depression there were changes in parental behaviours. The changed parental behaviours resulted in young children, especially boys, growing up with quite different values, behaviours and sense of efficacy, than older children who had been partly socialised before the failure of world stock markets. Unfortunately, the

longitudinal research required to understand macrosystem events is rarely undertaken and as a result little is known about the relationship between child development and culture-influencing events.

Conclusion

Extensive research into the early development of emotional expression has suggested that genetically determined differences in precursors of emotion may initially contribute to differences in expression of emotion but that learning both within the family and in the broader community modifies the expression of these genetically determined characteristics from a very early age.

EMOTION SOCIALISATION AND SKILLS DEVELOPMENT

Like many other competencies, emotional competence is culturally defined. According to S. L. Gordon (1989), emotional competence in any culture includes the ability to express and interpret emotional gestures, to control overt expression of emotion of disapproved feelings, to feel and express socially appropriate emotions, to recognise the vocabulary linking emotional terms to cultural meanings and to cope with distressing emotions. Similarly, Calkins (1994) has noted that in all cultures a person who is emotionally competent has access to the full range of emotions, is able to modulate the intensity and duration of emotion and to make smooth and fluid shifts from one emotion state to another. This researcher notes that such a person can integrate mixed emotions, is able to recognise the vocabulary of emotions and use verbal regulation of emotion, and also has the ability to monitor and evaluate emotional responses. All of these skills contribute to an ability to express emotions in ways which conform to culturally determined rules about how they should be expressed in a variety of social contexts. These authors both argue that such competence develops as a result of patterns of interaction between infants and young children and their caregivers, usually the parents, and later other members of the peer group and broader community. Emotional behaviour thus occurs at the interface between the individual and the community (Super & Harkness, 1986).

Most studies of children's affect-related skills have examined the extent to which children have acquired emotional competencies at various ages, fewer have investigated the ways in which parents teach information about how emotion is expressed in their

culture, and fewer still have investigated expression of emotion in contexts other than the family. The great majority of studies have focused primarily on the so-called "basic" emotions of happiness/joy, sadness, anxiety/fear, anger and surprise. This emphasis on a narrow band of emotions arises partly out of work done by Ekman and his colleagues (Ekman, Sorenson, & Friesen, 1969). Twenty-five years ago, these researchers commenced a series of studies into the expression of emotion which J. A. Russell (1994) has described as ushering in the modern period of research into this aspect of psychology. On the basis of findings from these studies Ekman and others (Ekman & Friesen, 1975; Ekman, 1973, 1992; Izard, 1971, 1992) have argued that facial expression of emotion is genetically programmed and therefore universal. Their argument is based on the fact that adults from ethnic groups and cultures as disparate as New Guinea and Japan are able to recognise and reproduce on demand facial expressions for at least six emotions - sadness, happiness, fear, anger, surprise and disgust - and possibly a seventh, contempt.

J. A. Russell (1994), in his extensive discussion of the methodological problems in this research has pointed out that there are many weaknesses. Respondents are typically asked to make a forced choice between named emotions, sometimes having pre-viewed the photographs used as stimuli and sometimes not having done so. He points out that while the frequency with which participant responses concur with predicted responses is consistently above chance the percentage of agreement varies from as low as 32.2% for sadness identified by an African group to as high as 97% for Americans identifying happiness. The extent of agreement with the predicted response is higher among Western participants in research, among better educated groups and for positive emotions. A free-choice response yields lower levels of agreement with predictions, but this is still above chance, typically, as Boucher and Carlson (1980) have shown, around 60%.

Despite the methodological problems there is currently agreement in the literature that the emotions of happiness, sadness, anger and anxiety/fear can be produced and recognised by members of many cultures, even when the stimulus material shows people other than those of the ethnic group currently responding to it. However, questions about contempt and surprise still remain. Many other emotions (e.g., shame,

guilt, pride) are considered to have a greater cognitive component which makes investigating them more complex and findings more difficult to interpret. These complexities have contributed to the present focus on the more basic emotions in a huge number of studies.

The focus of research in work with children from infancy onwards has been on decoding, the "reading" or understanding of others' indicators of emotion. Decoding studies of are limited relevance to the present research which is investigating encoding of emotion. In the remainder of the present chapter, these studies will be cited only briefly or where research into encoding is just not available. Encoding studies, that is, those which examine how individuals express their own emotions, will be discussed according to their main focus. The following section of the chapter outlines studies of non-verbal expression of emotion. Acquisition of the language of emotion will be addressed in a separate section towards the end of the chapter.

Nonverbal Communication of Emotion

As Lewis and Michalson (1982a) have pointed out "Emotional experiences are private acts" (p.181) which can only be communicated to others through various kinds of behaviours. These include a cluster of non-verbal responses, including vocal aspects of speech such as pitch and speed, facial expressions, body posture and gross motor movements and gesture. Most studies of non-verbal expression of emotion in which children have been the respondents have focused on facial expression of emotion. There have also been a number which have investigated the encoding and decoding of vocalisations. Relatively fewer studies of body posture, proximity to others, gross motor movement patterns or gesture as indications of emotion have been undertaken to date and only a very limited number of these have included children in the sample. The studies of children's non-verbal expression of emotion are discussed below in relation to the different components of expression of emotion. Firstly vocalisation studies are outlined, then those focusing on facial expression and finally motor expression of emotion.

Vocal Expression of Emotion

A mother's decoding of infant vocalisations, particularly those indicative of distress, contributes to the very survival of her child. A study of 18 infants by Wolff (1969) identified three different vocalisations to which mothers responded differentially. Two of these are relevant to the study of emotion, these being the anger cry which was described as loud and prolonged and the pain cry which had sudden onset, an initial long cry and extended breath holding. The third, the hunger cry, was more rhythmic and repetitive.

In a study where anger was elicited Stifter and Grant (1993), video-recorded the vocalisation of anger in response to frustration. Each 10-month-old infant in their sample (n = 84) played with an interesting toy for 90 seconds after which his or her mother removed the toy but kept it in visual range of the child. After 120 seconds or 20 seconds of hard crying she returned to toy to the infant but did not interact with her child until a further 60 seconds had passed. Negative vocalisations such as grunts, whines, protests, shrill crying co-occurred with facial expression of anger, but not with facial expressions of distress. Children who had expressed more interest during the initial episode of play with the toy showed more intense facial and vocal anger and less distress during the time when the toy was unavailable than children who had been less interested.

Working with somewhat older children Malatesta-Magai et al. (1994) investigated the vocal behaviours of 42 children whose mean age was 34 months. Emotion-related vocalisations were obtained during two play sessions, one with mother and one with an unfamiliar peer. Using a vocal affect coding system which they had developed they recorded six "pure" affective tones, interest, joy, surprise, sadness, anger and fear, a neutral category and three affect blends. From these they derived broader categories which they referred to as "total positive" and "total negative".

Data were compared with that obtained in an earlier phase of this longitudinal study, with corrections made for increased use of language among children as they approached their third birthday. Even when corrections had been made there was evidence of an

increase in vocal expression of emotion, notably in interest, surprise, joy and anger. In spite of the fact that no gender-related differences were obtained in this study, analysis of mothers' vocal expression of emotion showed she did vocalise differently according to her child's gender. Thus, mothers showed more positive blends to daughters, and more anger, surprise and sadness to sons. Such modelling of differences in vocalisation is likely to result in gender-related differences in vocalisations of children later in their development.

Studies of vocal behaviours among older children and adults have focused almost entirely on the development of decoding skills. Such studies have typically used one of two techniques, either the model repeats some neutral statement (e.g., names the letters of the alphabet) in such a way at to convey different emotions or else the content of the message is removed in some way (e.g., by filtering out certain frequencies of sound) leaving only the pitch and other vocal cues for the respondent to attend to (e.g., McCluskey, Albas, Niemi, Cuevas & Ferrer, 1975; Stifter & Fox, 1986). There is some evidence that results obtained are influenced by the method chosen (Sincoff & Rosenthal, 1985). Because the present research is investigating expression of emotion such decoding studies are not of particular relevance and will not be further discussed. Of greater interest would be studies of how children encode affect through variations in voice tone, pitch, and loudness. These aspects of oral expression of emotion have not yet formed the focus of any work despite some work with adults (e.g., K. R. Scherer, 1979). Instead, studies of children have focussed on facial indicators if emotion.

Facial Expression of Emotion

Where facial cues to emotions have been studied the research has commonly used techniques which permit a very fine analysis of movements of the facial muscles identified as associated with different affect states. Izard's (1979) MAX, mentioned earlier, is one such system. A similar coding system is Ekman and Friesen's (1978) Facial Action Coding System (FACS). It permits measurement of fine changes in facial muscle tension and muscle position. A modified version of this scale is sometimes used with children.

Typical studies, using either of these methods, involve video-recording facial expressions and analysing them frame by frame. In studies of young children split screen techniques allow analysis of mother-child interaction. Studies of older children have often asked children to pose facial expressions for different emotions or to decipher the facial expressions of others, usually adults. Many of the studies, both where research was carried out with mother-infant dyads and with older children have been analysed in this way and some of these are reported below.

Studies of infants and very young children. Infants show a variety of facial expressions which are interpreted as indicative of emotion from birth. Many of these are fleeting and occur spontaneously. Davidson (1984) has obtained data showing that expressions of interest, distress and disgust are shown by neonates in response to taste stimulation, but notes that evidence for social smiling, that is smiling in response to an external stimulus, does not occur until later, when the child is about 2 months old. Expressions indicative of fear, wariness and sadness are not found until later in the first year, often occurring when infants are about 7 to 9 months old. Findings such as these have led Fox (1991) to conclude that the "distinct patterns of the four primary emotions (fear, anger, joy, sadness)" can only be reliably coded using MAX (Izard, 1979) towards the end of the child's first year.

Besides taste stimulation a number of other strategies have been used to elicit facial expressions, especially anger. In one such study Stenberg, Campos and Emde (1983) removed a teething biscuit from a number of 7-month-old infants 1 - 3 seconds after they had put it in their mouth, repeating the procedure several times with each infant. Using time sampling and a version of the FACS method of assessing facial expressions, they reported a marked increase in anger components in facial expressions, while non-anger components of expression did not increase. With repeated trials over 60% of anger components were recorded in the facial expression. Stenberg in a similar, but unpublished, study discussed by Campos, Barrett, Lamb, Goldsmith and Stenberg (1983) used arm restraint to frustrate 1-, 4-, and 7-month-old infants. Using the MAX coding system he found a marked increase in anger components in facial expression followed this frustration. It was also noticeable that the number of anger components present in the expression increased rapidly between 4 and 7 months.

Observations of mothers and infants interacting have shown that infants show a number of emotions through varying facial expressions. Malatesta and Haviland (1982), for example, reported observing facial expressions indicative of interest, enjoyment, surprise, sadness/distress and anger in their sample of 60 children, aged 3 and 6 months, who were interacting with their mothers in free-play.

Studies of mother-infant interactions provide evidence that even very early socialisation of emotion varies along gender lines. For example, Malatesta and Haviland (1982) who used Izard's (1979) MAX system when analysing facial expressions shown by mothers and their infants as they interacted in a free play situation. Thirty of the children were aged 3 months and 30 were 6 months old. Detailed analysis was made of the middle 5 minute segment of a 15 minute play period. A 1 minute of reunion interaction after a brief separation during which all children had become distressed was also analysed. Both mothers' and infants' facial expressions were assessed. Malatesta and Haviland looked for expressions described by Izard (1979) but also included two additional expressions which were designated "knit brows", a pre-distress signal which also occurs during apparent concentration, and "brow flash," a greeting or acknowledgment signal. The investigators were especially interested in contingent reactions on the part of the mother. They defined contingent reactions as those changes in the mothers' facial expression which occurred within 1 second of a change in the infant's expression. Such responses occurred on 25% of occasions.

Mothers responded contingently to all expressions shown by infants except anger and pain in male infants. Anger elicited the knit brow while pain was ignored. Mothers matched girls' expressions of interest, joy, surprise, sadness and anger but ignored their expressions of pain and also their knit brow expression. Overall, the mothers facial expression was more often congruent with that of male infants, and when non-congruent offered a more restricted range of alternative expressions as models. Mothers also responded more contingently to their sons than to daughters. Their pattern of ignoring pain expressions is unexpected but may reflect the fact that such expressions were momentary rather than prolonged.

Tronick and Cohn (1989), in a similar study, investigated what the authors call the "social-affective behaviours" of 54 mother-infant dyads, with one-third of the infants aged 3 months, one-third aged 6 months and the remainder aged 9 months. Dyads were videoed during a 6 minute period of unstructured interaction. Data were recorded using the split-screen technique. Again, results showed that mothers were more frequently congruent with their sons than they were with daughters, this difference increasing with age. The authors point out that even in dyads where congruence is good, the percentage of time in which mother and infant are synchronous remains fairly low at 30% of interactions, a finding which is reasonably consistent with the 25% noted by Malatesta and Haviland.

This study is weakened by the exclusion of a rather large number of dyads from the original sample, particularly by the exclusion of 15 mother-infant pairs because the infant had "fussed" for 1 minute or more immediately prior to filming. No details are provided about the gender of these children. If they were mostly boys the data could have been influenced in important ways by their exclusion. It is possible, as Malatesta and Haviland (1982) pointed out in relation to their work, that the findings of both these studies could be explained in terms of the greater vulnerability of male children which is evident from birth. Mothers could recognise, for example, that male children find anger expressions distressing and hence avoid modelling them.

Malatesta and Haviland (1982) also considered their results from the point of view of learning theory. They argued that the rapid response of mothers to changes in infant facial expression places these interactive events within the time frame required for instrumental learning to take place. Robinson, Little, and Biringen (1993) have suggested that opportunities for instrumental learning continue to occur in mother-child interactions at a later age. Participants in their study were 70 mother and infant pairs, where the infants were 18 months old at the time of first assessment and 24 months when seen for a second time. These authors reported finding that mothers continued to match children's facial expression of affect at these ages, but showed a decrease in matching with their daughters between the ages of 18 months and 2 years.

Not unexpectedly, mothers also respond to babies' vocalisations and will spontaneously vocalise themselves during experiments set up to evaluate emotional congruence of mother-infant dyads. In some studies, however, where experimenters have attempted to ensure that the same emotion is being expressed by all participants, mothers have been taught to present with posed expressions of sadness or happiness.One of the criticisms which has been levelled at this research is that these mothers do not vocalise. Nor are they able to show the intensity of emotional response which occurs in natural play with the result that infants show different patterns of response to those that would occur in a less artificial interaction (Rosen, Adamson, & Bakeman, 1992). Additionally, there is evidence from some physiological studies that posed facial expressions differ in subtle but measurable ways from spontaneously generated expressions (e.g., Ekman & Friesen, 1982). It is possible that even very young children are beginning to discriminate between posed and genuine facial expressions.

The question of what exactly is being communicated between mother and child typically remains partially undefined in these studies. Robinson, Little, and Biringen (1993), for example, analysed data on facial expression and vocalisation rather than other forms of non-verbal behaviour although mothers in their study were interacting in structured play with their children so there was a whole cluster of other cues as to the emotional state of each member of the dyad which were not considered.

In addition it is possible that mothers are conveying more than just information about facial expression. According to the facial feedback hypothesis (Izard; 1971, Cappella, 1993) positioning of facial muscles is itself a cue to emotional state. From this, it would follow that as a result of differences in patterns of contingency male and female infants are learning to experience emotions in intensity and frequency which relates to their gender. Differences in the expression, and perhaps experience, of emotion is likely to be enhanced if differential patterns of reinforcement continue beyond the earliest months of life. Variations in maternal responding on the basis of the child's gender have been reported with children aged up to 30 and 35 months (Fivush, 1989) but beyond this age studies have taken a different focus. It seems likely, however, that these early patterns of variation in emotion expression on the basis of gender continue to be encouraged as children grow out of infancy and into early childhood.

Studies of children older than 3 years. Studies of the facial expression of emotion among older children have investigated both encoding and decoding skills. Some studies of encoding skills have looked at children's ability to imitate a model or pose, without a model, facial expressions of emotion. In others children's genuine facial expressions have been filmed without their knowledge, typically while children have been watching emotion-eliciting video or film clips. Researchers have again investigated a limited range of emotions, those commonly studied including happiness, sadness, anger, and fear or a fear/surprise combination.

Lewis, Sullivan and Vasen (1987) investigated differences in posed expressions only. Working with a fairly small sample of 47 subjects across five age groups including 10 adults, they asked participants "Can you make a ___ face?". Expressions for happiness, sadness, surprise, anger, fear and disgust were videotaped and subjected to analysis using the MAX (Izard, 1979) system. Partial expressions were also recorded. For both compete and partial expression there was a significant age effect. Two-year-olds failed to pose any expressions correctly, 3-year-olds posed happiness and surprise well, while 4- and 5-year-olds posed all expressions except surprise and anger as well as adults. The 3- to 5-year-olds showed progressively fewer partial expressions.

Other studies have included both posed and genuine expressions. An early investigation by Odom and Lemond (1972) measured encoding skills with a the sample of 64 children. Of these 32 were in kindergarten class at the local school (mean age = 5.8 years) and 32 were in Grade 5 (mean age = 10.7 years). Each subsample included equal numbers of boys and girls. Participants were given two out of four possible tasks, one discrimination task and one production task. Production, or encoding, tasks required that children either imitate the facial expression shown in a photograph or demonstrate how a person would look in a specific situation. All participants were photographed and these photographs were subsequently rated for accuracy of production by five trained adult raters. Odom and Lemond reported findings supporting their hypothesis that older children would be more accurate encoders, these differences being significant at the $p < .001$ level. But accuracy of response varied according to which emotion was being conveyed, joy being most successfully modelled and fear and disgust least successfully posed by all children.

This is a complex study in which complicated analyses were carried out, but unfortunately the validity of the findings is unclear. These authors used a 5-way analysis of variance which makes it difficult to know what the error variance is and how it might be dealt with. This problem is compounded by the absence of F tables in the published results. Fortunately there are a number of other studies which have been more limited in what they have attempted to discover and these have produced findings supportive of Odom and Lemond's study. One of these studies is that of M. L. Hamilton (1973). This study re-examined two aspects of Odom and Lemond's (1972) work, with three groups of children who were in nursery school, second and fifth grade respectively. These children completed a matching task which was the same as the one in the earlier study, except that there were 6 photographs to be matched instead of 8. Once the children had matched the photograph against the target, they were asked to imitate the facial expression while standing in front of a mirror. They were subsequently shown a happy and a sad film and their spontaneous facial expressions were rated by observers. Like Odom and Lemond, Hamilton was able to show increasing skill in both matching and imitating facial expressions of emotion. Interestingly, children who had higher expressive ability when asked to imitate expressions were better spontaneous encoders of emotion. There were also 28% of children whose facial expressions while watching the film were unrelated to or the opposite of what was expected, a finding which merits further investigation.

A more recent study which also included measurements of encoding skills in a naturalistic situation is that of Custrini and Feldman (1989). Using the now familiar procedure of selecting visual material which adult raters thought would elicit a range of emotions they showed 10 film segments, each of 2 to 3 minutes duration and representing one of 5 emotions to 33 children aged 9 to 12 years. Children's facial expressions in reaction to the film content were secretly video-recorded. Emotions which were predicted as responses to the film were anger, disgust, fear/surprise, happiness and sadness. Videotapes were then analysed by a group of undergraduate raters who assessed children's emotion encoding skills. Again, as expected from the earlier studies, happiness was most accurately encoded. Sadness, disgust and fear/surprise were about the same with approximately 50-60% of children responding correctly to these. Anger was most difficult overall.

Along with other studies (e.g., Ekman, Roper & Hager, 1980; Lewis, Sullivan & Vasen, 1987), these investigations all note an improvement in encoding skills during early and middle-childhood. It is therefore clear that skills in encoding emotion through facial expression develop as the middle-class child develops. Explanations as to how these skills are acquired remain unsatisfactory and Daly, Abramovitch and Pliner's (1980) statement that "attempts to explain individual differences in encoding and decoding abilities in terms of personality, cognitive or sex differences have been, on the whole, unsuccessful" (p.25) remains true today.

The relationship of skills development in encoding to specific events during socialisation has been little studied. Daly et al.'s (1980) research offers an interesting approach to the question although the study itself examined decoding. These investigators hypothesised that children learnt decoding skills from the quality of the mother's encoding of nonverbal information about affect state, that is, the quality of the mothers' modelling of facial emotional expression. Two alternative explanations seemed likely. Firstly, children whose mothers were good encoders might gain cues that helped them to become good decoders. Alternatively, children whose mothers were poor encoders might learn to attend to subtle cues to affect state and become good encoders.

Twenty middle-class mothers and their 5 year-old children were participants in this study, an unfortunately small sample, especially when the procedure involved using a median split to separate mothers who were good encoders from those designated poor encoders. Briefly, the procedure required mothers to be video-taped while viewing emotion-eliciting slides, rating of these mothers' emotional expression so that categories of good and poor encoders could be formed, viewing of the video-tapes by children who saw their own mother plus one good and one poor encoder.

The correlation between the quality of a mother's encoding and her child's decoding was moderate at r = .57 where mothers were good encoders but only low at r = .17 when the child was decoding the expression of a poor encoder. An analysis of variance showed only marginally significant advantage to off-spring of good encoders who were better decoders than children of poor encoders. This advantage occurred only when the facial

expressions of good encoders were being judged. These results suggest that while children learn some things about facial expression from good models in the home, a great deal of the variance in children's understanding about facial expression of emotion remains unexplained.

Besides the learning which takes place in direct interaction between parent and child, children also learn about emotion encoding by observing patterns of emotion communication between adults and other family members. E. M. Cummings (1987) and J. S. Cummings, Pellegrini, Notarius, and Cummings (1989), for example, have shown that young children pay close attention to angry interactions between adults. They express their emotional reactions to such behaviour directly and indirectly during the angry interaction and show altered patterns of play behaviour themselves during and immediately after being exposed to an angry interaction between adults. Miller and Sperry (1987), in a study with a sample of only 3 children also showed the modelling of angry behaviour. The study is widely cited, partly because it is one of the very few which have considered social class differences in modelling of affect. The study showed that these three low socio-economic status children were exposed to high levels of anger modelling by their mothers.

Another way of looking at encoding has been used by Coats and Feldman (1995). Earlier work by one of the authors (Houle & Feldman, 1991) had shown that non-verbal displays of emotion occurred on average at the high rate of 200 expressions per hour in television shows. Coats and Feldman predicted that children who spent more time watching television were likely to encode emotions differently from children who watched less. Working with 62 children in Grades 2 to 6, they recorded spontaneous facial expression during viewing of emotion-eliciting materials, plus posed expression of the same set of emotions, happiness, sadness, anger, fear/surprise, and disgust. Additionally they gathered data from the families about children's television viewing habits.

Results supported their hypothesis that children who viewed more television (mean hours viewing per week = 19) were better encoders of the two emotions commonly shown on television, happiness and sadness, than low frequency viewers (mean viewing per week = 6). Low frequency viewers showed more stable skill levels in encoding across a range of emotions. In contrast, the prediction that successful posing of emotions would also be related to their frequency on television was not supported. Instead an interaction between television viewing and type of encoding was noted. Both groups conveyed the intended emotion more successfully when posing than when showing a spontaneous expression but the low frequency viewing group were significantly more successful at posing than the high frequency viewers. The weakness of high frequency viewers in posing emotions is interpreted by the authors as indicative of a lack of practice in monitoring and self-regulation of emotions.

These researchers initially included anger in their study but dropped it from their final analyses because their "attempts to elicit this emotion were largely unsuccessful" (p.330). They do not expand on this statement nor offer suggestions as to how to overcome the difficulty of eliciting anger during video-viewing. They also concluded that children with high levels of television viewing may experience difficulty in social interactions as a result of limited self-regulatory skills. However, the possibility that the interpersonal problem could pre-date the high frequency viewing is not discussed and needs to be considered in future studies.

There are some problems with research methodology in the investigation of facial expression of emotion. Firstly, a number of studies have asked participants to pose the required facial expression. While both children and adults pose some expressions well, neither group poses all expressions sufficiently well for poses to be seen by raters as a good exemplars of that emotion (Lewis, Sullivan & Vasen, 1987). Such studies, then, tell about the individuals' ability to consciously re-arrange facial muscles into what they think is a representation of some emotions, but tell little about how those and other emotions are unconsciously and genuinely conveyed.

The socialisation of emotion may alter the way in which facial expressions are posed. Shields and Padawer (1984) have questioned the validity of concluding that a child can

or cannot pose a facial expression correctly by comparing it with adult facial expression for the same emotion. They present results showing that about one-fifth of the 81 children in their sample of 3 to 7 year olds showed idiosyncratic poses for some emotions. When children's posed facial expression of emotion were photographed these children were subsequently able to name the pose as showing the required emotion despite the fact that it was not an expression recognised by adults.

While studies which include both posed and naturalistic expression of emotion may be useful some additional issues also need to be considered. The quality of posed expressions may vary with the method used to obtain them. Children in a study by Field and Walden (1982) were most able to imitate an expression when the model was a photograph and they had not been given a verbal label for the emotion. This compared with use of a mirror and/or a label. Ekman, Roper, and Hager (1980) have also demonstrated practice effects with multiple trials.

In studies of genuine emotions fleeting facial expressions may not be noted in studies which do not use video-recorded data (Lewis, Sullivan & Vasen, 1987). Such studies have also been limited by the over-reliance on video-taping expression while children are watching film. As Coats and Feldman (1995) noted, this approach does not result in expression of anger. Variations of Stifter and Grant's (1993) approach with 10-month-olds might be helpful. For example, older children who are frustrated by working on an unsolvable puzzle for an extended period of time might show anger, especially if they are not in the presence of an adult, in which case display rules (discussed in Chapter 2) might be applied.

As will be noted repeatedly throughout this discussion of research into the development of emotional skills sampling in studies of facial expression of emotion has been restricted primarily to white middle-class American children. The occasional study has included children from lower socio-economic status families, but there have been insufficient of these for conclusions to be clearly generalisable.

Motor Behaviours

Both the study of body movement and gesture, known in psychology as the study of kinesics (Birdwhistell, 1983) and the study of interpersonal distance or proximity, called proxemics (Hall, 1963) in psychology, have shown that information about emotions is encoded via the body, its movement and positioning. Little work has looked at children's encoding of emotion through motor behaviours but studies of adults encoding have revealed that emotions are shown through physiological changes in skin temperature, sweat secretion and muscle tension (Collier, 1985). Eyebrow flashes (Eibl-Eibesfeldt, 1972), head position (Bull, 1978), gesture (Morris, Collett, Marsh, & O'Shaughnessy, 1979), touch, posture and movement patterns (Collier, 1985) and proximity (O'Neal, Brunault, Carifio, Troutwine & Eptsein, 1980) may provide information about emotional status although they sometimes also convey non-emotional information. Decoding studies with adults have shown that specific characteristics of posture such as whether the head is held upward or downward, trunk is stretched or bowed, and the position of arms in relation to the body (de Meijer, 1991), gait (Montepare, Goldstein & Clausen, 1987) speed of movement, and direction of movement (Rime, Boulanger, Laubin, Richir & Stroobants, 1985) all convey information about emotional state to observers.

One study of children's encoding of emotion through touch and proxemics is that of Berman and Smith (1984). These researchers asked children to pose for a photograph with a peer of their own gender. In one condition they were simply asked to pose, while for the other they were described as having just helped their sports team win a difficult match, a feat which had made their peer group very proud of them. Children were aged 9 to 12 years. Children in the winning team condition stood significantly closer to their peer and were more likely to touch their peer than in the neutral condition. Girls were also significantly more likely to touch mutually and reciprocally than boys in the winning team condition. Age differences were not significant.

Indirect information about encoding also comes from studies such as those of Ginsburg (1980) and Meerum Terwogt (1988, as cited by de Meijer, 1991). Ginsburg looked at

appeasement behaviours during disputes among third to fifth grade boys (n = 102) providing indirect evidence of emotion encoding since appeasement behaviours probably co-occur with fear. Children who successfully avoided continued aggression were seen to reduce their effective size through behaviours such as bowing their head, allowing their shoulders to slump or kneeling on the ground. They also avoided eye contact. Meerum Terwogt's even more indirect evidence comes from an investigation into how children encode emotion in their drawings. He reportedly discovered that drawings of happy children show the model with raised arms.

A decoding study by de Meijer (1991) included some children in the sample. Drawing on information about how dancers and actors convey emotion through posture and movement de Meijer encoded information about emotions by placing a doll-like manikin into a set of postures which he believed were indicative of different emotional states. Film of a person moving from a neutral standing position into each of these postures was also prepared. For example, joy was shown statically by placing the manikin with its head up and back, torso stretched and arms raised. In the video of this emotion, the model moved from a neutral standing position into the same posture. The four emotions shown were joy, grief, surprise and anger. Just under 100 children were then asked to name the emotion being shown. For the purposes of comparison, children were also asked to identify these emotions from facial expressions. Results showed that younger children (mean age = 5 years, 7 months) were significantly less accurate when decoding emotion through movement than older children (mean age = 7 years, 3 months), and children in both groups were less able to discriminate between emotions shown through large body movements than through facial expression.

Together with more general studies of non-verbal communication (e.g., De DePaulo, Rosenthal Finkelstein, & Eisenstat, 1979; Rosenthal & DePaulo, 1979) de Meijer's (1991) research provides indirect evidence for learning how emotion is encoded bodily. Children who can decode motor movements have probably observed models in daily life. They are probably learning to encode emotion in these same ways, but as von Raffler-Engel (1981) has pointed out motor expression of emotion frequently occurs in the context of facial and verbal cues, is fleeting and may not be closely attended to. For this reason knowledge about motor expression of emotion may be more difficult for

children to acquire. Von Raffler-Engel also pointed out that research into the development of motor expression of emotion is made more difficult by the fact that little is known about adult use of gesture, posture and movement to convey emotion and by the fact that notational systems used to describe body movements are cumbersome and analysis of data difficult. De Meijer's (1991) use of notations developed for dance and theatre may help overcome this latter problem.

Conclusion

Research to date provides ample evidence that middle-class American children learn a great deal about the non-verbal expression of emotion during their early years. Learning for each emotion appears to have its own timetable, with happiness/joy the easiest and fear or disgust the most difficult of the basic emotions studied to date.

The findings that non-verbal encoding skills increase with age, together with evidence that parents model some non-verbal expression of emotion differently according to the gender of their child, are of interest in relation to the present study where hypotheses, listed in Chapter 3, predict gender and age differences in children's expression of emotion will also be found in non-Western cultures.

Verbal Expression of Emotion

Children express their emotions in the course of everyday family life. Obviously in that context verbal behaviours form part of the repertoire of behaviours shown in relation to emotion. Research cited above has separated non-verbal from verbal behaviours in the attempt to clarify understanding of emotion but this does not mean that the language of emotion has not been investigated or is not important. Studies of verbal expression of emotion must therefore be considered if a full picture of children's learning in this area of development is to be drawn.

Acquisition of Emotion Language

Bretherton, Fritz, Zahn-Waxler and Ridgeway (1986) have pointed out that emotion words, that is those that "denote emotion states" (p.532) convey information about both an individual's hedonic tone and state of arousal and classification of emotion words by

both children and adults has shown that they use these two dimensions in reaching decisions about whether a word is an emotion word or not (e.g., Russell & Ridgeway, 1983).

Studies of the language development of young children have shown that use of emotion words occurs early in the production of speech. Bretherton, McNew, and Beeghly-Smith (1981), for example, found that more than one-third of 20-month-old infants in their study were described by their mothers as using the word "hurt" for pain, and over half reportedly used "dirty" for disgust in appropriate contexts. Bretherton and Beeghly (1982) similarly showed that between 30% and 60% of their sample (n = 30) of 28 month American infants used appropriate words for different emotions. Words used were primarily sad, happy, mad (for angry), scared and love. A few used the word "surprise". These children were able to link emotions to situations, referring to causal relationships between affect and event. They attributed internal states, including emotions, to toys during pretend play. (Beeghly, Bretherton, & Mervis, 1986).

Skills in emotion labelling develop rapidly. In a small study of children aged 2 to 5 years, Michalson and Lewis (1985) showed photographs of a child named Felicia posing six of the commonly studied facial expressions and asked participants "What kind of face is Felicia making?" Of the ten 2 year-olds only one was able to produce labels, and these were limited to the sad and happy faces. By age three, 27% of a sample of 11 children labelled the happy face correctly and 45% produced the correct label for the sad face. Some children also named surprise and anger correctly. Over 50% of 4 year-olds correctly labelled happy and angry face, while by age 5 this had increased to 80% for happiness and 100% for sadness and anger. These children could not label the surprise and fear faces with any degree of accuracy. As expected, the children's recognition of emotion was better when the emotion label was supplied than when children had to produce the label. By age 5 years these children scored 100% accuracy in selecting the photograph which represented happiness and sadness, and approximately 80% accuracy for surprise, anger and fear. Recognition of disgust was much less developed at this time.

Others, such as Denham and Couchoud (1990) and Ridgeway, Waters and Kuczaj (1985), have reported a very similar pattern of findings over the years. Ridgeway et al.'s large study (n = 270) looked at the recognition and use of emotion words in everyday life by children aged 18 months to 6 years. Both receptive and expressive knowledge was measured. Actual percentages of children who knew each emotion word at each age level differed from those obtained by Michalson and Lewis, but the trends followed the same pattern for sequence of acquisition of emotion language. In addition, Ridgeway et al. (1985) reported that 80% of children in the age range 66 - 71 months recognised 48 emotion words and used 23 of these. More than half recognised 74 such words and used 46 of them. Although weakened by its reliance on parent report this study lists a much greater number of words than is usually investigated with children and is likely to be a useful reference for investigators wishing to work outside the few basic emotions which have been studied to date.

Older children continue to gain knowledge of the language of emotion but research into these children's use of emotion words in daily life has not been investigated. Instead a few studies have looked at children's knowledge about more cognitive emotions, for example, pity and guilt (Weiner, Graham, Stern & Lawson, 1982) and jealousy, pride and gratitude (J. A. Russell & Paris, 1994). More research is needed into use of emotion language during the pre-school and primary school years.

Parental Modelling

It is evident from research into parent-child interaction that adults model use of emotion labels when responding to their children's expression of emotion from an early age. Much of the research involving very young children has focused on mother's behaviour as she models use of emotion language but sometimes the father has also been asked to interact with his child. Studies by Lewis and Michalson (1982b), Dunn, Brown and Beardsall (1991), Brown and Dunn (1992) Fivush and her colleagues (Fivush, 1989, 1991; Kuebli & Fivush, 1992; Adams, Kuebli, Boyle & Fivush, 1995) have looked at parent-child interactions in naturalistic conversation about the past.

These studies have thrown up some interesting results. Lewis and Michalson (1982b), for example, in their study of maternal labelling of the emotions of their 1-year-old

infants recorded the use of affect labels when mothers and their infants were reunited after a 2 minute separation. All children had expressed some degree of distress during the separation. Only 26% of the mothers used affect labels. Attempts to discover whether the so-called "labellers" differed from non-labelling mothers in measurable ways yielded no significant findings although there was a tendency for mothers of higher socio-economic status (SES) and those with higher scores on the verbal subscale of an intelligence test to be more likely to use affect labels. The type of label applied varied with SES and IQ measures. Higher SES mothers commented that their child was scared/upset while lower SES mothers were more likely to say their infant was angry/mad or sad/tired.

Maternal use of emotion language has been explored in studies with children aged 3 to 4 years in work done by Dunn, Brown and Beardsall (1991) and Brown and Dunn (1992), In the first of these studies Dunn, Brown and Beardsall observed 41 sibling pairs and their middle/upper- middle-class mothers for a total of two hours, when the younger child was 36 months old. The number of conversations about feelings to which the target child was exposed, either directly or because it involved their sibling, ranged from 2.1 to 25.0 per hour. No gender differences were found in the frequency of reference to feeling states, or mothers' references to feeling states, although it is not clear whether boys themselves referred to different feeling states than girls, as has been reported elsewhere.

Of particular interest in this study is the large amount of variation between mother-child dyads. For example, total mother to target child conversational turns ranged from 17.8 per hour to a massive 372.1. Within these turns, the number of feeling state comments made by the mother specifically to the target child ranged from 0 to 21.5. Such variation is important as discussions about emotions at this early age were shown in a later phase of Dunn et al's study to correlate with interpersonal skills as measured using Rothenberg's (1970) Test of Social Sensitivity. Although no definite conclusions can be reached about the impact of maternal use of affect labels with children of this age without longitudinal data, Lewis and Michalson (1982b) hypothesise that mothers who do use affect labels may provide "a linguistic experience that should facilitate the children's acquisition of affect terms" (p.202).

The second of these studies (Brown & Dunn, 1992) was longitudinal. The 50 children in the sample were 33 months at the time of first assessment and 47 months at the subsequent contact. Children in this study were second-born members of their families so patterns of interaction with siblings were also assessed. Brown and Dunn reported that, at both ages, when children were interacting with their mothers it was usually the child's emotions which were discussed but with siblings each participant in the discussion focused on their own emotion to a much greater extent. As would be expected children became increasingly able to discuss a range of emotional responses over this period. This appeared to be practised mainly in relation to siblings rather than in interaction with mothers. The finding supports Woollett's (1986) argument that the language environment of younger siblings in the family is different from that of the first-born in ways that suggest the need for additional studies in this area.

Mothers have also been shown to model different ways of talking about emotions to their sons and daughters. Fivush's (1989) study involved the youngest children. Participants in this study were 18 children whose mean age was 33 months, and their mothers. All dyads were white and middle-class. Mothers were asked to discuss specific one-time events in the recent past with their children, but were not given any indication that researchers were interested in the emotional content of the interaction.

Children used very few emotion words, averaging around 0.3 per event, but mothers used many more, around 2.5 per past event. There were no significant differences in whether positive or negative affect was referred to when talking to sons as compared with conversations with daughters but mothers did use the positive and negative affect terms differentially when the referent was considered. Seventy percent of the mothers' negative emotion terms referred to their sons and only 27% to their daughters. This difference was significant at the $p < .05$ level and shows that when mothers of daughters used negative affect terms with their female children they were referring to someone other than their daughter. Not one mother used the term "angry/mad" with their daughter despite the fact that the daughters themselves used the term. Instead, mothers

used "sad/cry" in discussion with their daughters much more than when talking to their sons. Astonishingly, two mother-child dyads used no emotion words at all during the discussion.

A later study with a larger sample (n = 30) showed that mothers were more likely to discuss causes and consequences of emotions with their sons and to accept their suggestion that retaliation against another was appropriate when one felt angry. In contrast they focused on the emotion experience itself when talking to their daughter and encouraged re-establishment of relationships as a resolution to anger-inducing events (Fivush, 1991). Fathers, too, talked to their sons and daughter differently (Kuebli & Fivush, 1992), again using significantly more emotion words, and a greater variety of such words, with daughters than they did with sons. Kuebli and Fivush suggest that the kinds of modelling used with infants in the earliest months of life may lead into a childhood-long pattern of differential verbal input, and hence learning, about emotions for boys and girls. Such a possibility is supported in a longitudinal study by Adams, Kuebli, Boyle and Fivush (1995). Again using a small sample (n = 17) these researchers found that by about 6 years girls were using a greater variety of emotion terms than boys. Parents continued to model different information about emotions to their sons and daughters, particularly talking more to their daughters about sadness and dislike.

A less naturalistic study showed that mothers' modelling of emotion language is associated with different outcomes for broader aspects of emotion in daily life. Denham, Cook and Zoller (1992) looked at the relationship between patterns of language use by the mother and her pre-school-aged child's skills in labelling emotions and comprehending situations which elicit basic emotions. Both a semi-structured situation in which mother and child looked at photographs of young infants showing various emotions together and a situation in which the mothers simulated anger and sadness were used. Children's emotion understanding was determined through use of a story technique and their emotional competence was determined by observation of children in the preschool and by data gathered from the teacher. Patterns of language which were optimal differed according to the context. Thus, mothers who repeated children's emotion-related comments during discussion of the photographs and those who provided unelaborated comment on, or explanation about, emotion-eliciting events

during the interaction had children with greater skills in understanding emotion-eliciting situations. Children who received explanation about emotions during the discussion of the photographs were also less likely to be perceived by their teachers as showing sadness in the preschool. In contrast, where mothers used repetition of children's emotion-related language during the simulation their children showed poorer emotion situation knowledge.

Conclusion

It is clear that children begin to learn the vocabulary of emotion from an early age and that boys and girls gain different knowledge about emotion as a result of their interaction with parents who differentiate on the basis of the child's gender. Naturalistic studies in the form of recorded discussions bring both the advantage of open-endedness and the disadvantage that, because coding of data is so time-consuming, sample sizes are generally small. On the other hand, laboratory studies can influence results by the way in which they approach the question of children's knowledge. As in other spheres, it is easier for children to recognise an emotion if given a label than it is for them to recall the label itself.

Social class differences in children's use of emotion words are also likely, but have not been the focus of investigation to date. Social classes differ in the extent to which different kinds of talk are utilised (Tizard, Hughes, Carmichael & Pinkerton, 1983a, 1983b), in the way emotion is modelled (Miller & Sperry, 1987) and possibly also in the actual emotions modelled most frequently. As a result, conclusions based on children from middle-class, white American backgrounds must be considered tentative until further work has been done.

General Conclusion

Extensive research has shown age-related changes in both non-verbal and verbal expression of emotion. An increase in skill in posing facial expressions of emotion is well established and there is also evidence that genuine facial expressions for some emotions develop as a consequence of learning. Evidence for age-related differences in vocalisations and motor movements and posture to convey emotion is less well

established. However, children are clearly exposed to modelling in these areas from the beginning of life and can be expected to learn how to convey emotion via these channels.

Again, studies of parental modelling suggest learning probably results in gender differences in verbalisation and gross-motor expression of emotion but further research is needed before this can be confirmed. Boys and girls do not appear to differ in the capacity to pose facial expressions of emotion but in real life, where rules about regulation of emotion influence emotional expression, they may do so, as is suggested in some of the studies outlined in the next chapter.

The many gaps in research into the development of expression of emotion mean that at present it is not possible at present to make any generalisations about how expression of emotion is socialised. The great majority of research has involved work with infants and very young children from well-educated middle or upper-middle class mothers and children in the United States of America. Very little is known about the fathers' role, about the impact of siblings, or about the effects of social class differences on children's learning.

Similarly, little is known about the socialisation of emotion in countries other than the United States of America. While unconstrained facial expression of emotion is unlikely to differ from one ethnic group to another it seems likely that verbal, gestural and gross motor expressions will vary quite considerably. Learning about these components of emotional expression may vary according to cultural beliefs about children and developmental timetables. Theory about the development of emotions suggests that children make the associations required in their culture and go on to develop culturally appropriate emotional schemata which determine emotional responses to stimuli. To date, such theory is supported by a limited body of research primarily obtained with a small subsection of the world's children.

CHAPTER 2: STRATEGIES INFLUENCING EXPRESSION OF EMOTION

Besides learning many skills in the communication of emotion during their early years children learn how to manage their emotions, through modification of the emotional state itself and through modification of its expression where open expression of how they are feeling might have negative outcomes for themselves or others. The development of skills in managing or regulating emotions, which begins early in infancy and continues through early and middle childhood, is the focus of the present chapter.

EMOTION REGULATION

Theorists describing the development of emotional competence consider skills in regulating emotion to be essential. Sub-skills in this area are mentioned in both S. L. Gordon's (1989) and Calkins' (1994) descriptions of the emotionally competent person, and its importance in successful interpersonal interaction is repeatedly confirmed (e.g., Denham, McKinley, Couchoud, & Holt, 1990; Saarni, 1990; Sroufe, Short, Motti, Lawroski, & LaFreniere, 1984). Calkins takes this interpersonal aspect into account in her definition of emotion regulation which, she says, includes "the processes or strategies that are used to manage emotional arousal so that successful interpersonal functioning is possible" (p.53). Thompson (1994) recently attempted to clarify the definition further, proposing that emotion regulation consists of "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions... to accomplish one's goals" (Thompson, 1994, pp. 27-28). Masters (1991) has suggested that there are three different types of emotion regulation, reactive, active anticipatory and automatic anticipatory. The two latter types are preventive and are used to avoid emotional dysregulation rather than to re-establish regulation after disruption. Thus, one consciously or unconsciously takes action to prevent experiencing negative arousal through actions such as shutting one's eyes when expecting to see something unpleasant.

Reactive regulation is used to remediate, maintain or enhance the state of arousal (Masters 1991) and regulation strategies may include modification, substitution or suppression of the expression of emotion (Casey & Fuller, 1994). Most studies

investigate this type of regulation, looking at strategies used to alter both the internal experience of emotion and its behavioural expression. Thus, infant's use of social referencing, children's use of coping strategies and older children's application of display rules, all outcomes of socialisation practices, have been treated as evidence of emotional regulation by various investigators. Studies of these aspects of emotional development are outlined below.

Emotion Regulation in Infants

Many processes involved in emotion regulation in infants are internal. Infancy researchers have shown that early emotion regulation requires the development of CNS inhibitory mechanisms to counteract the excitatory functions of the hypothalamic-pituitary-adreno-cortical network (e.g., Cicchetti, Ganibran, & Barnett, 1991; Thompson, 1990), a development that is probably genetically programmed. Infant temperament, which is also at least partly genetically determined, further influences the infant's capacity to regulate emotion. For example, infants who are temperamentally prone to intense negative reactions show higher levels of fearfulness and inhibition to new experiences during their second year, more frequently having difficulty regulating emotional expression than children who have had less intense reactions at an early age (Kagan & Snidman, 1991).

In addition, infants appear to discover accidentally that certain behaviours enable them to reduce uncomfortably high levels of arousal and they subsequently practice such strategies more systematically (Dodge, 1989; Kopp, 1982). From the earliest days after birth they control the quantity of stimulation using gaze avoidance (Termine & Izard, 1988) or other methods such as tactile self-stimulation (e.g., hand to mouth, patterns of arm movements, kicking), avoidance (e.g., arching back, leaning away) or respiratory behaviours such as yawning and sighing (Rothbart, Ziaie, & O'Boyle, 1992). Among others, Izard and Kobak (1991) also note the use of non-nutritive sucking as a strategy for managing the high level of arousal which is a component of some later emotions.

Male newborns appear to have less capacity to regulate emotional distress, using self-comforting strategies less frequently than female newborns (Feldman, Brody & Miller, 1980). Weinberg, Tronick, Cohn and Olson (1999), working with a sample of eighty-

three 6-month-old infants, of whom 38 were boys, have shown that this lower capacity for self-regulation is still influencing males' emotional responses much later in the first year of life. When mothers who had been playing for 2 minutes with their infant followed this with a 2 minute period in which they showed only a still face, their sons were significantly more likely to show both negative behaviours indicative of emotional arousal (e.g., fussing and crying, arching back, facial expressions of anger) and positive behaviours (e.g., facial expression of joy, positive vocalisations) than daughters. Female infants showed both more neutral and more interested facial expressions towards their mother or objects in the environment. Boys also took longer to achieve synchrony of facial expression (show the same expression) after a mismatch with their mother than girls in this study. These differences appeared not to be related to differences in maternal parenting practices.

The quality of infant attachment to the mother may contribute to the development of emotional regulation in infants. Spangler and Grossmann (1993) investigated this phenomenon using Ainsworth's Strange Situation procedure (Ainsworth & Wittig, 1969). In this widely used procedure infants spend a brief period with their mother in a strange setting, then the mother leaves the child either alone or with a stranger for about one to three minutes before returning. Children who have secure attachment with their mother instantly seek to regulate the distress that has developed during their time alone through bodily contact with the mother. Avoidant children do not seek contact and appear to have learnt not to show distress in this situation.

Spangler and Grossmann (1993) measured the heart rate and cortisol levels of 41 infants as they responded to the Strange Situation, finding that children who had an avoidant form of attachment with their mothers were experiencing considerable physiological stress. They interpreted this result as indicating that these children lacked a strategy for regulating their emotion. According to Cassidy (1994) it is possible that children with another form of insecure attachment, those who show more ambivalence towards their mothers, might react at the opposite extreme. The may heighten their expressiveness in response to separation above the level of negative arousal experienced in an attempt to interact successfully with their mothers when they are reunited.

It seems that paternal behaviours may also contribute to a pattern of restricted expression of emotion. Stifter and Grant (1993), in their study of infant indicators of emotion, found that vocal expression of negative affect was related to father's, not mother's, report of negative expressivity as measured using the Self-Expressiveness within the Family Questionnaire (Halberstadt, 1986). This questionnaire asks respondents to indicate how often behaviours expressive of emotion occur in general family life. Where fathers described themselves as high in negative expressivity infants showed little or no anger when a toy they had been playing with was removed but left in sight. The result suggests that these infants had learned to moderate vocal expression of emotion at an early age.

These early established patterns of expressiveness may be of life long duration although only occasional studies have investigated this. Two of these, longitudinal studies by Lutkenhaus, Grossmann, and Grossmann (1985) and Main, Kaplan and Cassidy (1985) have suggested that an infant pattern of restriction of emotional expression, developed in the context of poor quality attachment to the mother, may have become a well-established personal response to others by the preschool and early primary school years.

More general features of family life may also influence learning about how to regulate emotions. Garner (1995), who looked at the socialisation of emotion regulation with slightly older infants, assessed the relationship between the extent to which emotional expressiveness was encouraged in the family and toddlers' use of emotion regulation behaviours. Toddlers (n = 55, mean age = 17.7 months) were initially left with a pre-school aged sibling in a room containing a number of toys. After 4 minutes a stranger also joined the dyad and remained for several minutes. Measures of behaviours indicative of attempts to regulate emotion were recorded, for instance, self-soothing behaviours (e.g., sucking on body part, rocking) and comfort-seeking behaviours such as seeking proximity or contact with sibling or stranger. Mothers also completed the Family Expressiveness Questionnaire (Halberstadt, 1986). Toddlers showed more self-soothing behaviour when the stranger joined the dyad. There was also a significant positive relationship between the child's use of self-soothing behaviours and reported family positive emotional expressiveness.

Emotion Regulation Through Social Referencing

Studies from another perspective which also contribute to an understanding of the development of skills in the emotional arena are those which have investigated a phenomenon known as "social referencing". This has been defined as a process in which "one person utilises another person's interpretation of the situation to formulate her own interpretation of it" (Feinman, 1992, p.4) but problems of definition confound the studies. As Feinman, Roberts, Hsieh, Sawyer and Swanson (1992) have pointed out, some investigators limit studies to those in which the child is not offered any visual clues until he or she has sought information while others allow mothers to provide the required emotional expression prior to the child's seeking information. Emde (1992) has stated that social referencing occurs only when the infant gains emotional information, claiming that other kinds of looking, such as orienting to a voice or action, watching others communicate, or checking on caregiver reaction to infant action should be studied as separate aspects of development. He also suggested that social referencing may vary according to the age of the infant, so that during the first six months of infant life, it is the mother who is using cues from the infant as to the infant's emotional status, and that this determines her actions to some degree. Later comes the period referred to in the studies to date, where the infant is using cues from the mother as to how to respond. A further variant, which Emde called "social referencing in negotiation," may begin some time in the second year. This occurs when both mother and child offer emotional signals in the context of uncertainty. Finally, Emde suggested that possible further levels of development occur when the toddler is learning standards, rules and prohibitions, or the child in the third to fourth year is uncertain about roles and relationships.

Social referencing usually develops at around 10 months and is well-established by 12 months. It can be contrasted with an earlier process known as emotional contagion, in which the very young infant's emotion state somehow comes to match that of the mother. At its peak social referencing may occur with high frequency when the child is uncertain. There is some suggestion that actual frequency of referencing may vary in association with differences in quality of attachment (Dickstein, Thompson, Estes, Malkin & Lamb, 1984) although this is not always confirmed (Bradshaw, Goldsmith, & Campos, 1987).

In a typical study of social referencing the child is exposed to some novel or ambiguous object or event. The mother is trained to show either a positive, negative or, occasionally, a neutral facial expression if the child looks toward her for guidance. If the infant response to the object relates to the kind of information which has been provided through the mother's facial expression, it is assumed that the social referencing has provided information which has been useful for that infant. Both the child's emotional response to the novel stimulus and his or her behaviour in relation to that stimulus have been regulated by the mother's facial expression (Klinnert, Campos, Sorce, Emde & Svejda, 1983). Studies have used the visual cliff (Walk & Gibson, 1961), or novel toys as ambiguous stimuli (e.g., Hirshberg & Svedja, 1990; Sorce, Emde, Campos & Klinnert, 1985). These studies generally show that the mother's positive facial expression results in approach behaviour and negative messages elicit avoidance responses on the part of the infant. If both parents are present and simultaneously convey different emotions the infant becomes confused and distressed (Hirshberg, 1990).

While mothers are usually asked to model a trained version of a facial expression and not to convey information by other means a study by Rosen et al. (1992) has confirmed the need for more naturalistic studies. Rosen et al. asked mothers to provide restricted amounts of information indicative of happiness or fear on some trials while on others they were permitted to respond normally. In this latter instance they were able to provide the whole range of information they would usually offer about happiness or fear when their child looked to them during appraisal of unknown stimuli. Children in the sample were 37 twelve-month-old infants of whom 18 were girls. Stimuli were animated toys.

Differences in the mothers' facial expression for fear were found depending on whether this emotion was shown in the unconstrained condition with accompanying verbal and gestural information, or under constraint, where they were only permitted to show fear by trained facial expression. Under the normal, unconstrained condition mothers' facial expression showed less intense expression of fear for girls than for boys. Children who looked at their mother before reacting to the toy were also shown less intense expressions of fear than those who reacted first and then checked the mother's facial

expression in the unconstrained condition. These differences did not occur for either emotion during the constrained condition, nor for happiness in the unconstrained condition. The infants' reactions to the toy were, as expected, influenced by the mothers' response to it, and this effect was greater when mothers showed emotion naturally than when they were constrained in their expressions.

Rosen et al.'s (1992) study suggested one possible direction for further research. Another area where more study is needed is in the use of social referencing among older pre-school children. The few studies that have been done provide some support for the notion that the strategy continues to be used by older toddlers and that changes take place in the way in which it occurs. Hornik and Gunnar (1988), for example, showed differences in the responses of 12- and 18-month-old infants to mother's positive verbal and facial communications as their child looked at a caged rabbit. The older children were significantly more likely to approach the rabbit after referencing while younger children's responses did not change.

Walden and Ogan (1988), working with children whose ages ranged from 6 to 22 months, obtained interesting results. Mothers modelled either a happy or fearful face and made comments indicative of the emotion they modelled while children explored one of two ambiguous toys. Children in the youngest age group (6 - 9 months) appeared to be unaffected by the type of message but in free play at the end of the experiment were observed to play with the toys less if they had received a fear message during the earlier phase of the study. Children in the middle age group (10 - 13 months) showed the expected pattern of reduced approach in response to mothers' negative expression but children in the oldest age group (14 - 22 months) actually spent significantly more time touching the toy after a negative message from the mother than if she had shown a positive reaction when referenced. Patterns of referencing also varied, 14- to 22-month-olds were more likely to look at the mother questioningly before touching the toy, while 10- to 13-month-olds were likely to touch the toy first and only subsequently look at the mother.

Hornik and Gunnar (1988) raise some other issues which need to be addressed when studying social referencing in older children. They point out that many children may be

seeking more instrumental information (i.e., What is this and what do I do with it?) when they look at their mother during referencing. They found that unsolicited comments from the mother resulted in increased social referencing on the part of the infants in their study. They also note that as children acquire speech some of them ask without looking at their mother, although they are still clearly using her as a reference point in trying to determine their response to an ambiguous stimulus.

To date, however, writers (e.g., Klinnert et al., 1983; Rosen et al., 1992) have emphasised the emotional information that is conveyed during "social referencing". The process is seen one of appraisal, in which the child is attempting to determine the appropriate emotional response. It has been suggested (Rosen et al., 1992) that social referencing is used when the child's own initial cognitive appraisal fails. Appraisal is a cognitive component of the response to emotion eliciting stimuli which is widely recognised in the literature on adult emotions (e.g., Lazarus & Folkman, 1984). Skills of appraisal almost certainly develop during childhood but have not been so-named in research into child development and remain to be investigated with this age group.

Emotion Regulation in Children Older Than 3 Years
Research into the development of skills in emotion regulation among children above about 3 or 4 years in age has mainly consisted of asking children how some hypothetical situation would make them feel and what they would do to manage that feeling. Saarni (1989) has argued that a certain level of cognitive development is a pre-requisite for the development of emotion regulation skills. Talking about cognitions, as required in studies using hypothetical situations, is generally recognised as requiring more advanced development still and may influence findings in these sorts of studies.

There are also some particular problems with definition of terms in studies of middle childhood. Rossman (1992), for example, has pointed out that at times it is difficult to discover differences between what some researchers refer to as emotion regulation and what others refer to as coping. She uses the term "emotion regulation coping" and incorporates both notions in her studies. Despite such problems some careful studies have been done which have permitted children as young as 5 years to describe strategies they use to manage emotional arousal.

Various investigators have asked children how they would respond emotionally to hypothetical situations, and how they would manage both the situation and their emotional reaction to it. Studies by Rossman (1992), Altshuler and Ruble (1989) and Band and Weisz (1988) are typical of these. They are similar but include sufficient differences to be worth further consideration.

Rossman (1992) reported the development of a questionnaire to assess children's coping behaviours. Initially, she gathered data from 20 children who were asked to describe two real life events that made them feel bad or upset and to identify all the things they did to make themselves feel better. These ranged from everyday events to the much more traumatic death of a parent. A questionnaire developed from these data was administered to more than 300 children aged 6 to 12 years. All children sampled reported using a mix of internal and more external strategies to help moderate their emotions. Younger children and girls were significantly more willing to seek parental help in regulating/coping with unpleasant emotions than older children and boys. Girls were also more likely than boys to seek such help from their peer group. Younger children also attempted to distract themselves or use self-calming techniques (e.g., focusing on staying calm, giving self reassuring messages) more than older children. Boys were more likely than girls to express their distress through anger or aggressive acts, while girls were more likely to verbally admit to experiencing distress. Unfortunately the six factors that were derived from the data each explain little of the variance in coping with emotion. Even the first factor accounted for only 16.4% of the variance obtained while remaining factors accounted for about 5% each. Clearly, then, a large amount of the variance remains unaccounted for.

Altschuler and Ruble (1989) investigated the development of skills in emotion regulation from a coping perspective. They asked 12 boys and 12 girls at each of three age levels, 5-6 years, 7-8 years and 10-11 years to respond to questions about how children in general would feel in four different situations. Each scenario presented outlined a situation in which a child is exposed to an uncontrollable stressor. Children were also asked what they could do to change the situation, or to change their thinking or feelings about it. In total, the children nominated 29 different coping strategies which they could use in this situation. These were collapsed into five clusters which the

researchers labelled Approach (e.g., Seek information), Direct Emotion Manipulation/tension reduction (e.g., Act the way you want to feel), Partial Avoidance (e.g., Do something else, Think about something else), Complete Avoidance (e.g., Leave the situation, Sleep), and Maladaptive Strategies (e.g., Focus on the situation).

Use of avoidance strategies, both partial and complete, was shown to be the preferred responses of children across the age range. Preferred coping strategies were influenced by the valence of the scenario, which could be positive (e.g., waiting quietly for half an hour will result in the child being rewarded with a large candy bar) or negative (waiting at the dentist's to have a cavity filled). Younger children proposed both more behavioural and physical distraction strategies (e.g., leaving the scene) to help them moderate their negative emotions while older children again listed more cognitive strategies.

Band and Weisz (1988) also showed that these strategies help children manage emotional distress elicited in everyday situations, such as getting poor grades at school or losing a friend because of changing school or class. The 73 children who participated in their study were aged 6, 9, and 12 years, with approximately equal numbers at each age level. These authors looked at children's responses in a primary-secondary control framework. Children using primary control strategies made attempts to solve the problem, crying to elicit help or becoming aggressive. Some attempted to physically avoid the emotion-eliciting situation altogether. In contrast, children using secondary control approaches were more likely to vent their feelings through crying or aggression without expectation that this behaviour would elicit help. Others made efforts to avoid thinking about the emotion-eliciting situation, daydreamed to avoid thinking about it, or talked to friends or parents about it. Younger children were significantly more likely than older children to use primary control and less likely to use secondary control strategies.

There were several differences between the three studies outlined above. Between them they investigated real and hypothetical situations, with either completely uncontrollable or mixed controllable and uncontrollable stressors of varying intensity. Despite these differences some findings were in common. All investigators reported that during

middle childhood there was mixed use of behavioural and psychological strategies to regulate emotional distress. All reported that younger children were more likely to use behavioural avoidance while older children increasingly used psychological strategies. Some gender-related differences were found where these were investigated. Band and Weisz (1988) suggest that the later development of psychological strategies may be due to the fact that they are internal and modelling opportunities are therefore not available. Alternatively, as they note, these strategies for emotion management may only be more difficult for 6-year-olds to talk about so that differences in reporting may disguise similarities in practice.

Some problems were evident in these studies. It is not immediately obvious in Rossman's (1992) study, for example, why the item "Try and get right in there and fix things or solve the problem" should load on a factor that is primarily concerned with seeking social support from parents. Sample bias might have influenced the findings as approximately 10% of the children were from families where incest was at least alleged, and more than 40% came from two other studies where the study question referred to management of conflict within the family. On the other hand, it is a little surprising to find that the children discussing hypothetical situations in Altschuler and Ruble's (1989) study did not mention seeking support from parents. Perhaps they did not do so because they were discussing uncontrollable situations, where the preferred strategy is not to focus on the event. If they had been discussing controllable situations, they might have generated solutions that involved seeking parental help.

The relationship between reports of strategies used in management of remembered or hypothetical situations may or may not reflect actual strategies used. Masters (1991) reports an unpublished investigation of strategies nominated by 5- and 8-year-old children to moderate anger and fear. He and his colleagues induced a mild state of sadness or anger in half the sample, while the other half were reporting on hypothetical situations in relation to these same two emotions. Results showed that there was little difference in strategies named by children in real situations as compared with hypothetical ones. The children who were upset and those discussing a hypothetical situation nominated the same range and types of strategies for regulating emotion, suggesting both that for mild affect at least, the studies of hypothetical situations were

yielding valid information. Masters does note, however, that when more intense emotions are elicited young children may be less able to access strategies of emotion regulation. Obviously there are ethical issues in research involving the induction of more intense emotional responses and these may prohibit research into stronger emotions in children.

Only a very small number of the studies of the phenomenon of emotion regulation have included observation of children in real situations. Where this has been done it is clear that even pre-school aged children have already learnt a lot about when regulation of emotion is required. For example, Fabes and Eisenberg (1992) reported a study of 69 children's anger management during normal play and in interactions with caregivers. They found that by the age of about 4.5 years children had already learned to express their anger differently in different situations and that boys and girls had learnt differential ways of responding to anger-eliciting situations. Thus, both boys and girls were likely to vent anger (e.g., cry, yell) in angry interactions with adults but in interactions with peers boys continued to show this response while girls were more likely to use a pattern of active resistance. They were significantly more likely than boys to tell someone to give back their possessions when this was the source of provocation or to seek out someone who would help get it back. Clearly the girls in this study had learnt to regulate their expression of anger in certain social situations while boys either had not or chose not to moderate anger expression.

Young children may use both behavioural and cognitive strategies to moderate expression of emotion without being able to explain how they work. But with increasing cognitive development children are increasingly able to explain how using the strategies influences emotions. Harris (1989), commenting on a number of studies completed with various colleagues, concluded that although 6-year-old children know to use physical distraction as a way of coping with sadness, for example, and can say what they should do and that when they take this action they will then feel happier, they may not be able to explain why this happens. Indeed, although most 10- or 11-year- old children can explain why being active reduces sadness, some still cannot.

Despite the methodological limitations of research into emotion regulation during middle childhood it is clear that skills in this area develop during middle childhood. The question of how children learn such skills has only infrequently been addressed but a study by Casey and Fuller (1994) looked at maternal responses to 3- to 9-year-old children's emotional upset. These investigators prepared 12 very brief vignettes describing everyday childhood experiences likely to elicit an emotional response in a child. Some, such as the child succeeding at some very difficult task, were positive, and others negative, for example, being told by another child that he/she doesn't want to be friends any more. The 80 mothers who participated in the study were asked what, if anything, they would do to intervene if they were present when the event described took place. Mothers listed several strategies they might use to help the child feel less distressed, including ignoring the situation, comforting the child, talking about how to manage the emotion, distracting the child, providing instruction on how to respond, stating that they felt the same, providing some tangible aid and congratulating the child.

Casey and Fuller (1994) claim that mothers were significantly less likely to regulate anger than happiness, sadness or fear. The ways mothers regulated emotion also reportedly varied according to the age and gender of their child. Additionally, the authors claimed not to find any evidence that mothers used less directive strategies as children grew older. However, the analysis of the data is suspect and the explanation of procedures used is not clear enough to enable the reader to determine whether methods used were appropriate. This is most unfortunate as the study is the only one available that has attempted to look at mothers' teaching of skills of emotional regulation. Replication of the procedure with clearer analyses and preferably a larger number of children at each age level might provide interesting information about parenting practices in this area of emotional development.

Conclusion

Little is known about how skills of emotion regulation are learned despite repeated studies showing growth in knowledge in this area. Masters (1991) has discussed learning about emotion regulation in terms of classical conditioning, instrumental learning by trial and error, and social learning. He acknowledges that it is necessary to speculate widely to explain how these processes might work, but gives examples of

situations and parental responses which might result in certain types of learning. One example describes the child in a thunderstorm who may learn to regulate fear through the mother's modelling of interest in the drama of the storm. In another example he describes how the anticipatory crying of a child who expects the pain of an injection may elicit social support which helps him or her to regulate the fear actually induced by seeing features of the doctors' treatment room. Research into how and when emotion regulation is learned may be extremely difficult both because different types of learning probably occur on different occasions, and because this learning is incidental in the context of family life.

Display Rules

Emotion regulation enhances social interaction (Calkins, 1994). Another way of managing emotion which helps ease social interaction is to modify the expression of emotion without necessarily changing the underlying emotion. Where there is no change in emotional experience or intensity "display rules" are said to have been applied. Such social rules have been defined by Yarczower and Daruns (1982) as those rules about emotions which determine who shows what to whom in what circumstances. More formally Matsumoto (1990) defined them as "learned culturally determined rules that govern the display of emotion depending on social circumstances" (p.196). Use of such rules requires a capacity to regulate expression of emotion and may also be related to the individual's use of coping strategies.

The term "display rules" was used by Ekman, Friesen and Ellsworth in 1972 to explain the tendency of adult respondents in their studies to show different kinds or intensities of emotion depending on whether they were alone or in the presence of another adult, usually the investigator or a confederate, when undergoing some unpleasant experience. At present the extent to which learning about display rules differs from the kinds of learning which results in what is known as "social inhibition" (Yarczower & Daruns, 1982) is unclear. It is possible that these terms refer to the same development in emotion management. The ability to apply display rules probably requires that respondents know they can limit the show of emotion or show emotions that they are not experiencing. Such a capacity appears to develop some time between the ages of 2 and 3 years when

games of pretence first form part of children's play repertoires (Bretherton et al., 1988) although studies of display rules are currently considered to be separate from studies of conscious deception and pretence.

Very few studies of the impact of display rules on emotional-expressive behaviour have been done to date. Those that have been reported have typically used one of two strategies. In the first kind of study, the participant is placed in some situation which is designed to elicit expression of a negative emotion. Some participants are alone when the eliciting situation is presented while others are not. It is expected that the participant will reduce or replace the negative expression when in the company of others in the interests of not hurting the others' feelings or as a result of abiding by some social rule. This approach has been used in studies of adults and some studies of children.

The studies of Saarni (1984) and Cole (1986) provide examples of this approach in research with children. Saarni's (1984) study built on her earlier work with children in which she discussed story characters' responses in situations where self-interest required use of display rules (Saarni, 1979). In the later study Saarni asked 45 children aged 6 to 10 years to help assess some school workbooks. In the first phase of the experiment the children were given a prize, consisting of candy, a can of drink and 50 cents for successful completion of a problem from one of the workbooks. They were then asked to help again one week later, at which point their prize was a disappointingly drab and unimaginative age-inappropriate toy. All children opened both prizes in the presence of the experimenter. Children were video-taped throughout each session, including the period when they were responding to each "prize".

Behaviours indicative of emotion as they responded to each prize were compared. These behaviours were coded using a simple coding system, which incorporated aspects of facial expression, vocalisation and body movement. Three categories of emotional-expressive behaviours were identified, positive, negative and transitional, the latter consisting of a mix of behaviours some of which were fairly neutral (e.g., head tilting) and some unable to be categorised. Main effects for age were found for both the positive and negative behaviours. Both boys and girls showed more positive expressive behaviours and less negative behaviours with increasing age when they received the

disappointing prize. Older girls, those aged 8 and 10 years, were also significantly more likely than older boys to show a positive response when they received the disappointing toy as a prize. The reduced transitional responding with increasing age is explained in terms of children's increasing capacity to show the required expression in the disappointing situation as they grow older.

Cole's (1986) study was designed to eliminate some possible confounds in Saarni's (1984) work. Cole ensured that children found the "rewarding" prize rewarding and the "disappointing" prize disappointing by asking children to rank possible prizes in order of preference before the study began. She also used Ekman and Friesen's (1978) Facial Affect Coding System (FACS) to ensure that detailed analyses of facial expressions were possible and had child participants complete both phases of the study in one session. This ensured that these young children maintained the expectation for a good prize from the first to the second phase of the study. Although the youngest children in Cole's sample were younger than those in Saarni's sample (mean age = 4.4 years) she reported very similar findings except for finding no main effect for age. Findings that Saarni had described as transitional were also less common, possibly because the finer analysis permitted by use of the FACS permitted classification into positive and negative groups to be more readily made.

It should be noted that in both of these studies the children's responses can be explained in terms of a social rule "look pleased and smile when someone gives you something which they expect you to like - even if you don't " or in terms of real concern for the person who had gone to the effort of providing a gift and who might be upset if it was not liked. It is possible that the general social rule applies in cases where children are given gifts by relatively unknown researchers but that the more personal concern for the other's well-being applies when the gift-giver is better known.

Gender-related differences in use of display rules might arise because boys in this age group are less motivated than girls to use them, not because they do not know what to do. A recent study of this possibility was that of Davis (1995). Introducing a motivating game into the usual procedure allowed Davis to explore the question of whether the higher level of negative facial expression shown by boys was an outcome of lack of

ability or lack of motivation. She obtained the interesting result that when highly motivated to dissemble the extent to which boys showed negative emotion was greatly reduced, but they were still less successful at hiding their emotions than girls. The subgroups of children in her study, at ages 6 years 11 months and 9 years 3 months, had been deliberately selected to approximate the ages of those in the studies of Saarni (1984) and Cole (1986), so the research tends to confirm the possibility that girls are socialised differently from boys in this area of emotional expressiveness, and that they are expected to have more control over certain emotions in social situations. Studies of adults suggest that this gender-related difference in expression of negative emotion continues through to adulthood (Dosser, Balswick, & Halverson, 1983) and that it occurs in a variety of situations (Johnson & Shulman, 1988). These findings again support the perception that socialisation of display rules differs for boys and girls.

The second approach to the study of display rules has been used primarily with children. Using this approach the researcher reads a story about some emotion-eliciting event and asks the respondent to identify both the emotion the story character might experience and the facial expression they might show. Depending whether the story character is described as being alone or in the company of others he or she might be expected to show a facial expression that is congruent with the emotional response or one which is incongruent. In most of these studies it has been in the story character's interest to display incongruent facial expressions as this has allowed them to maintain their self-esteem or safety when in the company of others. Having selected the response that the story character would show, respondents in these studies are typically asked to justify their choice. This approach permits a wider range of situations to be considered than has been possible using the earlier method.

Again there are only a few studies which have used the story technique. Harris and some colleagues (Harris, Donnelly, Guz, & Pitt-Watson, 1986; Gross & Harris, 1988) have used it with children as young as 4 years. They have found an age trend in children's capacity to recognise the need to hide true emotions in some circumstances and in ability to provide a justification for their selection of discrepant facial expressions for the story characters. Four-year-olds were more able to distinguish between appearance and reality in relation to stories in which the character experienced

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negative emotion (e.g., feeling upset because of being teased) than they were when the story line told of positive emotional experience (e.g., holding a possibly winning hand in a game of cards). Older children, 6 year-olds and 10-year-olds, could make the distinction in both positive and negative situations. With increasing age children were also increasingly able to provide a reasonable justification for disguising their true emotion. Harris et al. (1986) argued that the limited justification skills of younger children show they have only partially developed schemas for display rules.

In their 1988 study Gross and Harris attempted to discover whether children realised that their facial appearance could make others develop incorrect beliefs about their feeling state. Using the same stories and again working with children aged 4 and 6 years they included an additional question about the extent to which observers would be aware of the story characters' feelings when display rules were being used. Compared with 4-year-olds the 6-year-old children had significantly greater knowledge of the effect of disguising one's emotion on others' beliefs, recognising that belief was based on appearance. When asked to explain why the story character might show discrepant expressions these older children referred to the child's motive (e.g., so other children won't laugh) or explained that the characters's facial expression provided false cues. The 4 year-olds as a group were unable to consider motive and facial expression in this way.

These two studies suggest that knowledge about display rules is only partially developed at 4 years but is fairly well-established by 6 years. But although Harris et al. (1986) claim that the lower level of success of 4 year olds cannot be explained in terms of characteristics of the stories there are linguistic features of some stories which are likely to make them more difficult for 4 year olds than for older children. For example, the first positive story reads

> A big boy runs past Diana. Suddenly the boy slips and falls over. Diana thinks that it is funny, but she doesn't want the boy to know how she feels in case he gets cross with her.

The suggestion that Diana hides her emotions is implicit here in contrast to some other stories used by Harris et al. (1986) which state explicitly that "Diana tries to hide how

she feels". Other characteristics of the stories which could contribute to difficulty are varied sentence length, greater or lesser amounts of information to set the scene as opposed to information about the protagonist's emotional reaction to the event, use of summary words such as "so" to link one sentence to the previous one and phrases such as "because otherwise," which embed the clause "Diana tries to hide how she feels" in the middle of the sentence in some stories. Describing the characters as trying to "hide" feelings might itself cause difficulties for young children. The possibility that characteristics of the stories confuse the younger children is supported by evidence that in Harris et al.'s (1986) study 5 out of a total sample of 24 failed to reach a criterion level of understanding on at least one story despite repeated readings.

Some early work using the story method raised other issues which appear not to have been fully explored in subsequent studies. Saarni (1979), for example, presented children with one of two variants of four story lines. Each story described some event in which the child might want to show an emotion that was different from the one he or she was actually experiencing. In the first version of the stories the event happened in the presence of a known peer while in the second variant the observer was either an unknown peer or an adult. Ten boys and 10 girls at each of three age levels (6, 8, and 10 years) participated in the study with half of the boys and half of the girls at each age level responding to each variant. Children's explanations for their decisions about which expression would be shown were subdivided into four categories. Some children explained their responses in terms of the character's attempts to maintain self-esteem or avoid trouble, while others emphasised maintenance of the relationship or of the norm for behaviour.

As with other affect-related skills, knowledge about display rules was shown to increase with age. Additionally, justifications became more abstract and generalised with 10 year-olds, for example, more likely than 6- or 8-year-olds to offer norm maintenance rules such as "It's impolite to show you feel... ". Across all groups, however, 43% of children explained that display rules helped the story character to avoid trouble, 33%

used self-esteem maintaining explanations and 19% focused on relationship maintenance advantages in using display rules. A limitation of the study, as Saarni herself noted, was that, because of its small sample size, further confirmation of these results was needed.

A later study by the same author (Saarni, 1988) included a lot more questions about children's understanding of display rules. Children in the sample were aged 7-8, 10-11 and 13-14 and there were markedly more girls (n = 31) than boys (n = 20). Children responded to four scenarios describing respectively fear at being bullied, disappointment at receiving an undesirable gift, falling over and hurting oneself after having shown off on one's skates, and distress over setting off the school fire alarm and being intercepted by the principal. Children were asked what emotion would be experienced and shown, whether the display rules applied would be effective, and what would happen if someone almost always or almost never showed their genuine feelings.

Children's responses varied according to which scenario they were referring. For example, both boys and girls became less convinced, as they got older, that not showing fear to a bully would be effective, but increasingly thought that showing a positive face when receiving a disappointing present would be an effective strategy. The percentage of children who expected that using display rules would result in positive outcomes also varied quite markedly for different scenarios. For example, about 70% of all children expected that not showing how one felt in the skating scenario would yield a positive outcome while very few expected that the strategy would bring positive outcomes in the fire alarm scenario. For boys, age trends were sometimes unclear, with 10-11 year-olds responding in ways that were inconsistent with overall trends for the total sample. This result suggests either that boys of this age may be in transition in some understandings about display rules or that the small sample produced distorted results.

Children were aware that showing one's real feelings almost always or almost never would probably be detrimental. Over 55% said that a person who did so would be rejected by others, while others said that such a person would be perceived as vulnerable (7.1%), would get into trouble (5.9%) or would hurt other's feelings (3.5%). In addition respondents were able to explain how they worked out when to show

feelings and when to apply display rules, although younger children were less skilled at this than older ones. The 13-14 year-old girls were most skilled in this area, with 53.8% giving explanations that included reference to the importance or intensity of their emotion and to the quality of the relationship. About 60% of the remainder of the sample gave generalisable explanations that referred to either the emotional intensity or the relationship.

Gnepp and Hess (1986) have done some work which attempts to tease out additional aspects of knowledge about display rules. These authors identified two types of display rules, those which are culturally determined and which tend to be prosocial, and those which meet the need of the moment and which tend to be self-protective. They further divided these categories of display rules into verbal and facial subcategories. Results obtained with a sample of 36 children at each of four grade levels showed that children at all ages had better knowledge of verbal display rules, whether prosocial or self-protective than of facial display rules. Awareness of the use of discrepant facial expression as a self-protective display response remained least developed of all four subcategories. An interesting finding was that knowledge about display rules appeared to increase between the ages of 6 and 10 years but plateaued at that point, with little gain between ages 10 and 15. No gender-related differences were reported at any age level.

The separation of culturally valued pro-social display rules from need-of-the-moment self protective rules seems difficult to sustain in daily life. Children who modify verbal behaviour or facial expression when accused of wrong doing, for example, may know both that their mother will be upset at the naughty behaviour and that she will punish them for it. Such children may be applying the pro-social rule "Don't upset others" and the need-of-the-moment "Avoid trouble" rule more or less simultaneously when they respond with feigned innocence. Which rule they say they are applying may reflect some other aspect of development besides knowledge about display rules. In addition, answers may be influenced by the way questions are framed.

Conclusion

Like emotion regulation, development of skills in managing the display of emotions occurs throughout the early years of childhood. Unfortunately few studies of emotion regulation during middle childhood have been done and some methodological issues have yet to be resolved. In particular, the language structures used in some story scenarios presented to young children may confuse them. Similarly, the types and sequencing of questions may limit the kinds of information children supply.

Gaps in research with children also exist. For example, Zuckerman, Larrance, Spiegel, and Klorman (1981), studied "leakage" of information about genuine emotional state when adults were applying display rules. Leakage occurs when cues as to the real emotional state are shown in some nonverbal manner while other verbal or nonverbal behaviours are being used to disguise this emotion. Zuckerman et al. reported finding that among adults leakage occurs via voice tones even when facial cues are deceptive. Awareness of this aspect of nonverbal behaviour appears to be limited even in adults, but some observers, who are sufficiently perceptive, may respond to them. Children's capacity to "read" such leakage cues has not been investigated although studies of deception (e.g., DePaulo & Jordan, 1982) suggest they will have limited skills in this area.

The relationship between what children say they know when confronted with a story and what they actually do in a real situation needs further investigation. Saarni (1988) has suggested that children have a cognitive understanding of display rules before they can use them effectively. As this is the reverse of the usual pattern of development further investigation is required. Work such as that of Saarni (1984) and Davis (1995) provides an indication of the direction such work might take. Inducing different levels of motivation, or varying the relationship of child and "other," in real as well as hypothetical situations may reveal the extent to which children's cognitive knowledge of display rules is related to what they actually do.

General Conclusion

Emotion regulation begins with biologically determined development. This is rapidly overlaid with learned regulation, which commences during the earliest months of life and continues to develop throughout early and middle childhood. Research to date, however, leaves as many questions about the development of emotion regulation unanswered as it has provided answers for. In particular this is true of studies in the area of social referencing which appears to be related in complex ways to attachment and possibly via attachment to temperament. Studies of middle childhood developments in regulation also need refinement so that results are not confounded by extraneous variables such as language use in story scenarios, or differences in the controllability of the stressor. Gender differences in motivation to regulate emotion also warrant further exploration. Despite these problems there is already evidence that white middle-class children's skills in regulating emotion change and improve over the first 10 years of life.

The kinds of knowledge and skills that have been described for white middle-class children in Chapter 1 and in the present chapter may or may not be representative of the kind of learning about emotion which occurs in children from other ethnic and social groups. Evidence for similarities and differences between ethnic groups in such emotion-related skills is outlined in the next chapter.

CHAPTER 3: CULTURE AND EMOTION

Differences between various ethnic groups in the precursors of emotional development, in the development of non-verbal and verbal emotional expression and in emotion regulation have been found in cross-cultural research as in the monocultural studies outlined in the two earlier chapters. Such cross-cultural differences in emotional development are almost certainly the outcomes of differences in parenting practices and definitions of emotional competence in families with different ethnic and cultural heritages. The present chapter addresses the issue of culture in relation to child-rearing before presenting studies which have investigated aspects of children's emotional development in two or more different social/cultural environments.

CULTURE

Culture has already been mentioned briefly in the context of parental expectations and beliefs. It needs further clarification for the purposes of the present study which is concerned with differences and similarities in behaviour that might be associated with broad, cultural level values. Since the terms ethnicity and culture have been applied rather interchangeably in general use, and sometimes carry different meaning depending on the nationality of the author, they clearly also require further differentiation for the purposes of the present study. In addition, the related terms "race" and "nationality" must be defined to show why they are not considered useful.

"Race" and "nationality" both lay claim to a uniformity within large groups which does not exist. Thus, the word "race" refers to observable physical differences believed to be genetically based, and is used to divide humankind into broad groupings (e.g., Caucasian, Asian), while the word "nation" refers to a political entity which supposedly consists of one uniform ethnic group. Within any one race or nation, however, there is typically considerable ethnic and cultural diversity, so attempts to explain psychological or behavioural variation along these lines results in too much loss of information to be useful (Cummins, 1997; Segall, Lonner & Berry, 1998; P. B. Smith & Bond, 1993).

On the other hand, many cross-cultural studies have used ethnicity or culture as the basis for selection of groups or as terms to explain difference. But the terms themselves may not be easy to define as noted by Meyerowitz, Richardson, Hudson and Leedham (1998) and also by Berry, Poortinga, Segall, and Dasen (1992) in relation to ethnicity. The latter authors state that ethnicity is usually believed to consist of two facets, one more objective and one subjective. From the objective point of view, there is an expectation of both biological and cultural continuity which can be observed and recorded. Biological continuity implies that one's forbears were of the same ethnic group, while at the cultural level, there is evidence that present day culture is derivative of earlier forms and practices although specific practices may have been modified over time. At the subjective level, there is the sense of attachment to the same group, and identification with that group, referred to as ethnic or social identity (Tajfel, 1978).

Berry et al. (1992) point out that choice of language to describe people who differ on these objective and subjective dimensions is somewhat arbitrary and probably reflects a bias rooted in particular societies. This is confirmed by a difference between Canadian and Australian usage. John Berry (1990), writing about Canada, says that the term "ethnic group" is "most frequently used to refer to people who identify with, and exhibit, a common heritage in the second or subsequent generation after immigration" (p. 242). The first generation of any group of settlers in Canada are known as "immigrants". This contrasts with the Australia practice where the term "ethnic" has two uses but is applied to both the first generation of settlers and their descendants. Among the general community the term is usually applied to describe only those people who are immigrants of non-English speaking background, or whose forbears met this criterion. People who meet these criteria constitute about 17% of the Australian population and the use of the term to describe them often carries a rather pejorative tone. Official publications, however, recognise that "ethnic" is a term which applies to all humans. The formal definition used in Australia says "the term 'ethnic' refers to a groups of families and persons who....feel themselves, or are felt by others, to be a separate people" (Khoo & Price, 1996, p.2). This feeling of separateness may be on the basis of history, language, culture, religion or other shared characteristics.

It is clear that the shared history which results in identification as member of particular ethnic group includes culture. This perception of the closeness of the relationship between the terms "ethnicity" and "culture" is reflected in the occasional use of the word "ethnocultural" to include aspects of both. This latter term is not widely used in Australia and consequently it will not be used in the present study.

The Place of Culture in Psychology

In cross-cultural psychology modern definitions of culture (e.g., Berry et al., 1992; Brislin, 1990; P. B. Smith & Bond, 1993) are typically derivative of those developed by anthropologists. In that field Tylor's (1871, as cited in Berry et al., 1992) first definition described culture as the "complex whole which includes knowledge, belief, art, morals, laws, customs and any other capabilities and habits acquired by man as a member of society". Subsequent anthropologists sometimes included long lists of components of culture in their definitions, producing the 164 definitions were reported in a review by Kroeber and Kluckhorn (1952). These authors separated definitions into six different sub-types according to emphasis, which ranged from descriptive, historical, normative, psychological and structural to genetic. In contrast, Herskovits (1948) described culture simply as "the man-made part of the environment" (p.17).

Culture is not static but changes with variation in the environment and sociopolitical situation. Williams (1980) states that at any given moment the dominant culture of a community contains residual and emergent features. Residual features are those remnant aspects of culture derived from earlier sociocultural practices and beliefs which continue to be effective in the present. New meanings, values and practices which are just being incorporated into the dominant culture form the emergent features of that culture. Jayasiruya (1993) also discusses archaic aspects of culture, those that relate to past patterns and core values and constitute historical tradition. Children are likely to be exposed to all three aspects of the culture in the process of socialisation.

Another approach to culture is that of Hofstede (1980). Hofstede's attempt to tease out some of the differences between cultures has had a marked influence on research into the relationship between culture and behaviour over a period of 20 years. In 1980,

Hofstede described the preferred patterns of behaviours in various relationship and decision-making contexts, of people from 40 countries around the world. His sample consisted of over 100,000 employees at all levels of a multi-national company in 39 of these countries and employees in the same industry in the 40th. From his data he identified four dimensions along which cultures varied. The first of these he called Individualism-Collectivism, with cultures placed along a continuum from one extreme to another, according to the extent to which members were group focused. According to this approach, more collective cultures are ones in which there is concern for the well-being of a clearly identified in-group. This involves taking account of others before the self, a willingness to live with a larger group and to work as a group. Members of individualistic cultures are, as might be expected, more concerned with their own well-being and development. They have more flexible membership of a number of groups which they join and leave as they wish.

Uncertainty avoidance as a cultural dimension refers to the extent to which members of a culture are comfortable with uncertainty. Those in Uncertainty Avoidant cultures experience discomfort when rules are not clear. They tend to live in societies where job stability is valued, and also to have rather high levels of stress. High scores on this dimension are, according to Hofstede (1980), likely to be associated with high scores on Masculinity, another of the cultural dimensions. The Masculinity extreme of the Masculinity-Femininity continuum refers to high valuing of clearly defined male roles by both men and women. Societies identified as Feminine allow more role flexibility for males. (Women's roles are not considered by Hofstede despite the label). Hofstede noted that an alternative name for this dimension might have been Career versus Social orientation, with "Social" substituting for Feminine.

The fourth dimension of culture identified in Hofstede's (1980) study was that of Power Distance. This label describes a "measure of the interpersonal power or influence between B and S as perceived by the least (sic) powerful of the two, S" (p.71) where 'B' refers to the boss and 'S' to the subordinate or worker. Hofstede pointed out that there is a tendency on the part of more powerful persons in any relationship to try and maintain or increase the interpersonal distance between themselves and the less

powerful, while the reverse is true for the latter. High Power Distance commonly occurs in societies in which there are marked inequalities across a number of areas of life, for example, wealth, rights and privileges.

Cross-cultural psychological studies since the mid-1980's have primarily related findings of difference between cultures to Hofstede's dimensions, especially the Individualism-Collectivism dimension, and have shown little interest in trying to define the more global dimension "culture". Recently there has also been some interest the so-called "Masculinity-Femininity" dimension of culture also identified by Hofstede (e.g., Kim, Triandis, Kagitcibasi, Choi & Yoon, 1994; Triandis, 1995), but work in the remaining two areas of Uncertainty Avoidance and Power Distance has not yet been undertaken.

Although most studies which have incorporated the dimensions identified by Hofstede have been studies of adults, a small number of investigations have also considered the implications of different levels of individualism and collectivism for children's development. Such studies have looked at reward allocation (Mann, Radford, & Kanagawa, 1985), empathy (Borke, 1973), sharing (Rao & Stewart, 1999) and more general social development (Fang & Keats, 1989). These studies are outside the parameters of the present research and will not be discussed.

As Hofstede (1980) himself noted, the dimensions he identified are culture-wide characteristics so that although they contribute to our understanding of the nature of culture they add little explanatory value when the specific behaviour of individuals or smaller within-culture groups is being considered. Indeed, it is possible, as Schwartz (1996) has pointed out for apparently contradictory values to co-exist in the same culture. For example, in a culture in which high Power Distance is valued, humility is also valued. Workers interacting with employers are expected to show humility while the employer is haughty. Should the worker be promoted he or she will also express haughtiness in interaction with subordinates. Thus, the capacity to express both haughtiness and humility co-exists in members of the culture and are both valued. These opposing values result in differing sets of behaviours depending on the relative status of the individual.

It is evident that the word "culture" is problematic in psychology. In the past it has been used as a selection criterion in some studies and as explanation for difference in others. Although Jahoda (1984) has argued for retention and clarification of the concept others, such as Kagitcibasi (1996), have not found it useful. Kagitcibasi concluded that the "diffuse, all-inclusive nature of culture" (p.10) and the culture level variants identified by Hofstede (1980) created problems for researchers. They are both still too far removed from actual behaviour to explain research results. Additionally, Kagitcibasi points out that where respondents are selected on the basis of cultural differences explanations of findings in terms of culture become tautological. Her position then, supports Segall's (1983, 1984) argument that it is not worth the effort of attempting to define culture. Segall had emphasised the need to gather more data, recognising that variations in behaviour need to "be better documented before we set about explaining them" (1984, p.160). This position is also held by Poortinga, van de Vijver, Joe and van de Koppel (1987) who described the term culture as "a summary label, a catchword for all kinds of differences between cultural groups, but with in itself virtually no explanatory value" (p.22). Thus, in the present study ethnic groups with different cultural heritages will form the sample but the term "culture" will not be used to explain results.

Culture and Child Development

While the writings of both Williams (1980) and Hofstede (1980) gives some clues as to the relationship between culture in general and the enculturation of children, this does not form the focus of their work. Two approaches which try to explain aspects of children's enculturation are those of Berry (1976, 1994) and Ogbu (1981). Both these writers acknowledge that besides growing up in the man-made environment which constitutes their culture, children are also developing in a physical environment, sometimes referred to as the ecology. The man-made environment is not independent of the physical environment. Berry, in his ecocultural model of relationships between environment, culture and psychology and Ogbu, in his cultural ecological model of child rearing, have attempted to relate culture to features of this physical world.

Berry's (1976, 1994) model incorporates major background factors such as the physical environment and sociopolitical context. According to the model, biological adaptations

to the environment and cultural adaptations to the sociopolitical situation influence, respectively, the genetic material and cultural information which is transmitted to subsequent generations. A combination of environmental influences, genetics, cultural knowledge and sociopolitically determined enculturation all influence both the observable behaviours and the inferred characteristics of members of a group.

Ogbu's (1981) more detailed model, points out that the skills, cognitive, language and social-emotional competencies of a community develop in relation to their strategies for coping with the environment. These competencies become imbued with cultural value and are then stressed in the process of child rearing. His cultural-ecological model of child rearing recognises the initial impact of the environment in determining what tasks are required. This then leads to certain patterns of social organisation which ensure survival of the group. Such patterns of social organisation also become associated with particular patterns of adult behaviour and competencies. Adults who show the required competencies become models of success, and theories develop about which child-rearing patterns will produce a new generation of adults with these competencies. Parental theories result in the use of particular child-rearing techniques. These in turn result in the development of a dominant child type with useful patterns of competencies, ensuring the continued survival of the group.

These theories provide some arguments for variations in child development which are associated with cultural variation. As Super and Harkness (1986), Bronfenbrenner (1988) and Kagitcibasi (1992, 1996) have pointed out, this cultural variation influences the child via the immediate context of the family and the broader context of community values. Problems can arise where characteristics of the child such as temperament or ability are inconsistent with the expectations of the parents. For example, Super and Harkness (1994) use a "goodness of fit" framework to explain what can happen in a family where the child's temperament is generally at odds with cultural values. Using a case work example they describe a difficult Greek-American child whose mother and father were not able to accommodate his demands. In their terms, the parents were unable to provide the kind of niche required for this child to develop satisfactorily. They note that the niche might well have accommodated a less temperamentally demanding child.

Similarly, de Vries (1994) gives various examples of poor "fit" between a child's temperament and the demands of his/her culture as revealed in family interactions in various tribes in Kenya. Case notes describe a Digo mother's experiences in raising an energetic lively intelligent child in a culture in which parents and teachers expected children not to stand out from the group. In this instance the child initially developed patterns of withdrawal and shyness which later developed into fear, anger and overactivity. But de Vries also describes an overactive, demanding "fussy" child born into the Masai tribe where assertiveness is valued. This child survived a drought where others did not because his fussing elicited attention and resulted in more frequent feeding.

These studies show ways in which parenting is influenced by cultural values and contributes to the transmission of these values. It can therefore be predicted that socialisation of emotion will also vary along cultural lines. This is suggested by the few cross-cultural studies of children's emotional development which have been undertaken to date.

EMOTION IN CULTURAL CONTEXT

The study of emotion in cultural and cross-cultural context has focussed primarily on the search for universals of emotion. Studies have therefore investigated a small group of emotions across a large number of cultures (e.g., Morsbach, 1973; Boucher & Carlson, 1980; Ekman et al., 1987) and have mainly used adult samples. In these studies respondents have typically been asked to name and/or to imitate the emotion shown. Where children's emotions have been studied the same procedures have been followed. At present, there are only a few studies of the emotional development of children from countries other than those of the wealthy first world and because of the wide range of factors which contribute to cultural variation (Goodnow, 1996; Hofstede, 1980; Ogbu, 1981) it is impossible to generalise to all ethnic groups from these few. Such studies as have been reported will be discussed in the remainder of the present chapter.

Precursors of Emotion Socialisation across Cultures

Temperament

A limited amount of research has examined the question of whether the people of all ethnic groups are genetically predisposed to the same intensity and frequency of emotional experience. One of the earliest studies to look at temperament within the first few days of birth is that of Freedman and Freedman (1969). These researchers compared the behaviour of 24 ethnically Chinese neonates, born in the United States, with the same number of Euro-American neonates and reported significant differences. Chinese-American neonates were less changeable, less perturbable and more able to calm themselves or be quickly consoled when upset. Kuchner (1980; as cited in Bornstein, Gaughran & Homel, 1986), in an unpublished longitudinal study of Chinese-American and Anglo-American infants from birth to five months has reported similar findings as have Kagan et al. (1994).

These latter researchers (Kagan et al., 1994) looked at a sample of 247 infants from around Boston, USA, 106 Irish infants and 80 Chinese infants in Beijing. Approximately half of each ethnic group were males, and the average age of the infants was four months. Motor activity, vocalisation, smiling, fretting and crying were assessed. The Chinese children showed significantly less motor activity, cried and fretted less and were less likely to vocalise. No differences were found for frequency of smiling. The authors discuss the possibility that these differences are the result of selective reinforcement of behaviours over the 4 month period of early infancy. They note that smiling, which has been shown to be very sensitive to the effects of differential reinforcement did not differ between the groups and concluded that their results were most likely to have occurred as a result of genetic differences between the Chinese and the other two groups.

Keefer, Tronick Dixon, and Brazelton (1982) have reported some differences between the 15 Gusii (Kenyan) and 15 Anglo-American neonates in their sample. Gusii neonates were more capable of soothing themselves when distressed through hand-to-mouth behaviours although this difference occurred only with a probability of 0.08. Interestingly, there were also trends for the Gusii infants to habituate (that is, to show decreasing reactivity to repeated stimulation of the same type) more rapidly to tactile

stimulation than Anglo-American infants, to show fewer startle responses but to be more irritable. This study has been criticised for using Brazelton's (1973) scale on which some items may be susceptible to the context in which assessment occurs. In general, however, the results of this and other studies into early differences in reactivity suggest that further cross-cultural studies of infant temperament would be worthwhile.

Family and Community

Cultural differences in expression of emotion seem probable because of differing beliefs about what constitutes competence in adults. These beliefs influence parenting practices. For example, the frequency and intensity of a child's emotional behaviour is altered as a result of patterns of interaction with the parent. Thus, according to A. L. Richman, Miller and LeVine (1992), Gusii mothers in Kenya studiously ignore their children when they become "over-active", (show high arousal and low self-regulation) promoting a calm pattern of behaviour in their children through extinction. On the other hand, Kyrios, Prior, Oberklaid and Demetriou (1989) have postulated that Greek parents respond to even the slightest indication of emotionality in their young infants and actively reinforce both frequency and intensity of such expression by interacting positively with the child at such times. This pattern of reinforcement, together with a possibly genetically determined tendency towards being slow to soothe and low in self-regulation might explain the common finding that Greek children are "difficult" temperamentally (Prior, Garino, Sanson, & Oberklaid, 1987; Kyrios et al., 1989).

Cultural values may also influence questionnaire based findings in some other ways. For example, Greek mothers live in a culture where mothers are expected to sacrifice themselves for their children and, according to Kyrios et al. (1989), this may make them more likely to describe their child as difficult, the demand of the child justifying the sacrifice. Similarly, Chinese mothers have described their infants as more difficult than American infants (Hsu, Soon, Stigler, Hong, & Liang, 1981), a report that is inconsistent with observational data reported by Freedman and Freedman (1969) and Kagan et al. (1994).

Studies of very young children in various countries have used the so-called "Strange Situation" (Ainsworth & Wittig, 1969), a measure of infant attachment to the mother.

Such research shows the difficulties of cross-cultural investigations with infants. For example, research in Germany (Grossmann, Grossmann, Huber & Wartner, 1981) found 49% of infants to show the patterns of behaviour associated with an anxious avoidant attachment, that is, when reunited with their mother after a brief separation these infants ignored her. This form of attachment has been associated with poor developmental outcomes in studies in the United Kingdom and the United States and occurs relatively infrequently in these countries. The German researchers, however, thought that a so-called anxious avoidant attachment might develop because of a cultural requirement for early independence, which they claimed might be already comprehended by very young German children.

The meaning of Grossmann et al.'s (1981) results was discussed by IJzendoorn (sic) and Kroonenberg (1988) who performed a meta-analysis of attachment data obtained in the United States, Great Britain, the Netherlands, Sweden, Japan and China and Germany. Although meta-analyses must be treated with caution these authors reported finding that the differences within cultures often outweighed differences between cultures. They noted, too, that because samples in attachment studies are usually small, it is important not to assume that the results obtained in any one study are typical of patterns of maternal-child attachment within that society.

These authors specifically identified the Grossmann et al. (1981) study as an extreme outlier suggesting that their results were atypical for Germany. More recent work in that country, however, continues to yield contradictory results. IJzendoorn and Kroonenberg (1988) cite unpublished work suggesting that German infants' attachment is similar to that of other European infants while others (e.g., Zach & Keller, 1999) suggest avoidant attachment is more common there than elsewhere in the West. More subtle analyses of infants' attachment behaviours may be required before this issue can be resolved.

Studies in Japan, such as those by Nakagawa, Lamb and Miyake (1989) and Takahashi (1990), have revealed other culture-related difficulties with the use of the Strange Situation. These research groups have both have assessed Japanese infants' responses to this procedure. Sample sizes in the studies were satisfactory, with 50 to 60 Japanese infants in each sample. In both studies a great majority of the Japanese infants, briefly

left alone in a strange room as required by the procedure, became extremely distressed, necessitating the abandonment of the research. A similar outcome had occurred when Chen (1985) earlier attempted to replicate a study of social referencing among 11 month old Japanese infants. High levels of infant distress occurred when mothers were separated for a short time from their infants in order to learn what they had to do in the experiment. The experiment was unable to be completed as infants did not calm down when reunited with their mothers.

All these Japanese investigators concluded that distress occurred because being left alone was not a common experience for young Japanese infants who have an almost symbiotic relationship with their mother in the first few years. The brief period of separation, defined as a low to moderate stressor in the West, is much more stressful for these infants. Takahashi (1990) concluded, in relation to the Strange Situation, that an "objectively identical procedure does not necessarily guarantee applicability to different cultures" (p.29) and this conclusion seems also to apply to research into social referencing. These few studies, therefore, suggest that cultural factors influence the precursors of emotion socialisation in ways which are at present not well understood.

A study which looked closely at parent-child interaction when children were slightly older is that of Kornadt, Hayashi, Tachibana, Trommsdorff and Yamauchi (1992). These researchers asked parents from Germany, Sweden, Japan and two Indonesian groups, the Balinese and Batak peoples, what the value they placed on aggression and how they responded to their children in situations of conflict. The total sample consisted of 98 German mothers, 30 Swiss, 67 Japanese from two towns, 56 Balinese of whom approxmimately half were described as "traditional", and half "modern", and 63 Batak, also designated traditional and modern. About half of each group were mothers of boys and all their children were in the age range 4 to 6 years.

Questionnaire and survey techniques were used to gather data. To the extent that aggressive behaviour is an indication of anger it can be concluded that these mothers differentially valued and encouraged the expression of anger through a range of parenting practices. For example, German mothers most frequently stated that they criticised their children and Japanese and Balinese mothers said they criticised least.

Batak mothers were similar to German mothers in their use of criticism, but valued compliance much more. In situations of conflict German and Swiss mothers said they compromised significantly less often than the Asian mothers said they did. The study is of interest because it asks about quite specific parental behaviours. Follow up work examining the extent to which mothers' actually do behave in the ways they say they do would be valuable, especially in light of longitudinal research showing that aggressive behaviour develops early, varies between countries and is stable over time (e.g., Eron & Huesmann, 1987).

With older children cultural valuing of certain emotions has been shown to influence the frequency with which that emotion is reported. Tikalsky and Wallace (1988), in a study of Navajo children's fears noted that Navajo children reported on average 22 unrealistic fears as compared with 4 for Anglo-American children. They discuss differences between the two groups in relation to how fear is perceived, stating that in traditional Navajo culture having many fears may be considered "a sign of perceptivity (sic)" (p. 490). Such a view is likely to result in increased valuing of fear and perhaps exaggerated reporting. This contrasts with the low valuing of fear in Anglo-American families where parents are concerned if a child reports many fears and where they probably model lower levels of fear reporting.

Language, unless carefully clarified, may be a factor in some questionnaire and interview findings. For example, Osterweil and Nagano (1991) reported differences in what was meant when Japanese and Israeli mothers talked about emotional independence. Japanese mothers used the term to refer to the capacity for establishing social relationships while Israeli mothers emphasised the children's capacity to be alone and to occupy themselves using their own initiative.

There is some evidence, too, to suggest that parental expectations about acquisition of emotional control varies across cultures. Hess et al. (1980), for example, interviewed 58 Japanese mothers and 67 American mothers of 4 year-old children, asking them about the age at which they expected their children to have mastery of a large number of developmental skills. Japanese mothers' responses to three emotion-related items (Does not cry easily, Can get over anger by himself, Stands disappointment without crying)

showed expectations of earlier mastery of emotion than American mothers' responses (p < .001 for all three items). A replication of this study in Australia (Goodnow et al., 1984) showed Australian-born (n = 38) and immigrant Lebanese-born (n = 43) mothers to be similar in their expectations about emotional maturity. Comparison of the Australian data with those of Hess et al. showed that both groups of mothers in the Australian study expected later mastery of emotion-related skills than either Japanese or American mothers.

In another detailed study Joshi and MacLean (1997) compared maternal expectations of child development among mothers from India, Japan and England. A questionnaire listing 45 competencies of which 10 referred to emotional competence was administered to 50 Indian, 70 English and 50 Japanese mothers. Mothers were asked whether they expected the child to have mastered the skill before age 4, between ages 4 to 6, 6 to 8, 8 to 10 or beyond 10 years. Emotion-related items asked parents to indicate, for example, whether the child should be able to "Control anger by (him/her)self", "Hide upset at being teased by others" "Not cry easily". On all emotion-related items Indian mothers reportedly expected competence at a later age than did Japanese or English mothers. Although the statistic chosen (ANOVA) is unsuitable for the data, which were presented in grades, other data, showing percentages of mothers expecting mastery of skills at each age, support the statistical analyses. Sixty-four percent of Indian mothers expected mastery of emotional control only at the age of 8 to 10 years as compared with 23% of English mothers and 24% of Japanese mothers. Approximately half of these two latter groups expected emotional control at the age of 6 to 8 years. Such differences in parental timetables for mastery can be expected to result in different patterns of response to expression of emotion as parents socialise their children towards culturally accepted norms.

Culture and Non-verbal Communication of Emotion

Although some cross-cultural studies have looked at the non-verbal communication of emotion these have, once again, mostly had adult samples and will not be outlined in any detail here. Such studies (e.g., Sogon & Masutani, 1989; Sweeney, Cottle & Kobayashi, 1980; Vogelaar & Silverman, 1984) show ethnic group and gender-related differences in non-verbal expression of emotion and its recognition when only non-

verbal cues are available. Differences in skills among the adults of different ethnic groups suggest that younger members of the community learn to focus attention on different aspects of emotion. Studies of children themselves are few but the interaction between mothers and infants and patterns of non-verbal emotional behaviour of older children have occasionally been investigated.

Studies of mothers and infants. Cross-cultural studies of early social interaction between mother and infant have focused on feedback within the dyad. Kanaya, Nakamura and Miyake (1989), for example, compared Japanese and American maternal response to various emotion-related facial expressions offered by their 5 month-old child. They reported similarities between the mothers from the two ethnic groups. Mothers responded to infants positive expressions with the same expression slightly exaggerated. Neither Japanese nor American mothers showed negative expressions to their young child. They concluded that by modelling only positive affect mothers are modifying children's facial expression.

A broader study of mothers and children from four ethnic groups looked at eye contact and facial expression. The study, by Keller and Eibl-Eibesfeldt (1989), included six Greek and nine German mothers interacting with their children. In addition 10 Trobriand mothers or other female caregivers (from an island in Papua New Guinea) and 14 Yanomani Indian fathers or other adults (from the upper reaches of the Orinoco River in Venezuela) interacting with infants were included. Infants ranged in age from 2 to 6 months. All participants were filmed for a period of about five minutes. A special mirror camera was used with the Yanomani and Trobriand people to ensure that filming did not disrupt normal interaction patterns.

Only face to face interactions were analysed, these constituted less than two minutes of film on average but yielded a total of 414 adult looking and 226 infant looking episodes. Although duration of adult gaze, infant gaze and eye contact varied markedly between groups, caregivers from all ethnic groups were in synchrony with their infants, and produced a range of vocalisations, and facial movements. The Yanomani Indians were the only group to show any facial expressions that were not necessarily positive. Members of this group grimaced with mouth, cheek and lip involvement. For other

groups facial expressions included use of the greeting face, and smiling only. Thus, while the study reveals that negative expression may be conveyed by parents of infants, it also suggests that use of negative expression in interaction with very young children may occur among relatively few ethnic groups.

Studies in East Africa have shown how important it is to take account of broader cultural norms concerning expression of emotion when looking at the quality of affect in mother-infant interactions. A number of early investigators (e.g., Goldschmidt, 1975; LeVine, 1977) reported finding that East African mothers provided primarily instrumental care for their infants and that mother-infant interactions were characterised by low levels of positive affect. P. L. Kilbride and J. E. Kilbride (1983) challenged this belief in a study of the Baganda of Uganda. These researchers were aware of a sharp distinction in the culture of this tribe between private and public expression of emotion. Public expression of emotion was much more muted than was the case in private. They therefore chose to undertake observations of 12 mothers and their 13 infants (including one pair of twins) in their homes over the first 6 to 8 months of the child's life. In order to reduce the "public" nature of the situation J. Kilbride and a Muganda (woman of the tribe) assistant made repeated visits of one hour's duration, once or twice a week, during which mothers' first language, Luganda, was spoken and the official status of the observers reduced as far as possible. A total of 107 hours observations were made during which the presence or absence of each of a number of affect-related behaviours was recorded for each 5 minute period of time.

In this private situation, behaviours associated with positive affect were recorded 56.7% of the time. Mothers' affect-related behaviours included hugging, kissing, smiling and stroking the infant, holding it face-to-face and looking at it. The frequency with which each behaviour occurred was different from what might be seen in the West, with stroking, face-to-face positioning and just looking at the infant making up respectively 22.6%, 31.2% and 35.4% of affect-related behaviours. In contrast, hugging, kissing and smiling at the infant made up only 17.9% of these behaviours in total.

A. L. Richman et al. (1992), who were interested in the patterns of interaction of Gusii mothers and their infants, obtained results confirming those of P. L. Kilbride and J. E.

Kilbride. Working with a sample of 28 Gusii mothers and a comparison group of 20 mothers from Boston, USA, they reported that the Gusii mothers' preference for holding and touching their children, rather than talking to them when the infant cried, was strong at both 4 and 10 months. In contrast, the Boston mothers had established a pattern of talking to or just looking at the infant when it cried by the time it was 4 months old and continued to use this response at infant age 10 months.

A. L. Richman et al. (1992) reported on the marked difference in number of years schooling between the Gusii mothers and the Boston mothers. Most Gusii mothers had 2 - 3 years schooling while the American women had 14 years. Obviously education could be a possible confounding factor in their study. To investigate this possibility, they did an additional study which is also reported in the 1992 article. In this study they worked with 72 young Mexican mothers who had little schooling (2 years) or quite a lot (9 years). Observations were again made in the home although mothers were observed only for four 20 minute sessions over a two day period. Differences associated with years of schooling were apparent. Mothers with more schooling talked more in response to their infant's looks, vocalisations and motor acts than those with only a couple of years at school. This pattern was true for infants aged 5, 10 and 15 months.

This small group of studies show that research into patterns of maternal response to infant indicators of emotion need to be carefully planned and executed when different ethnic/cultural groups are compared. A knowledge of cultural norms and related parental beliefs and behaviours is required if useful information is to be obtained. The relationship of education to parenting in cultures in which there is rapid change is also clearly an issue. The young mothers who have more schooling in those developing countries where girls' attendance at school is low may differ in a number of ways from those with less schooling as a result of their own parents non-traditional beliefs and behaviours in relation to daughters. In this situation it is possible to over-emphasise the effect of maternal education levels and to fail to attend to the impact of other features of culture. These, through their influence on the mother's personality and behaviour, may have an equally important effect on both infants and older children.

Studies of children older than 3 years. Only a handful of cross-cultural studies of school aged children's emotional development have been done to date. One of the very few which looked at encoding is that of Farver, Kim and Lee (1995). In this study 96 children 3 to 5 years in age were observed in pre-school settings. Half of the group were Korean-Americans, children of first generation Korean immigrants. All children were from middle-class families. Among other behaviours, emotion-related facial expressions, defined as neutral, positive, shared positive and negative, were recorded. Shared positive affect was recorded when the target child and one other in an interaction both smiled or laughed (in contrast to positive affect which was coded when only the target child did so). The Korean-American children showed a significantly higher rate of neutral and shared positive affect than American children but did not differ significantly from the Americans on positive or negative affect. The Korean-American results are consistent with a collectivist Korean culture and with the widespread East Asian emphasis on moderation of emotions.

One of the two studies undertaken by J. E. Kilbride and Yarczower (1976, 1980) included a measure of encoding skills. In this study (J. E. Kilbride & Yarczower, 1980) the children were Zambian and American. Three Zambian children, aged 6 - 7 years, and another three, aged 9 - 10 years, were asked to identify and then pose facial expressions for happiness, sadness and fear. Posed expressions were then photographed. Sixteen American children also posed the expressions. American children's expressions were then rated by 75 American university students, while Zambian children's expressions were rated by 35 Zambian university students. Zambian university students rated the Zambian children as less accurate in their imitation of emotions than American university students did for American children. Zambian children's clarity of facial expression was further decreased when they were required to show the facial expression in the presence of the experimenter. Besides this, Zambian children had initially been less accurate at identifying facial expressions from photographs.

The authors concluded that their study revealed cultural differences in the ability of Zambian and American children aged 6-7 and 9-10 to imitate facial expression, with American children more skilful than Zambian children. But there are a number of other possible explanations for the differences, some of which are acknowledged by the

investigators. Children who were identifying and then posing emotions were all responding to photographs of white models. It is also quite possible that some emotions were ones which Zambian children had been taught not to show in the presence of adults. Additionally, cultural factors could explain differences in the university students' responses. For example, it is possible that Zambian raters responded differently from Americans to ambiguity in the stimulus material. Or the Zambian children, trying to produce expressions like those in the stimulus material may have produced facial expressions unlike those typical for expression of happiness, sadness and fear in their own culture. Asking the raters to also respond to photographs from the culture other than their own might have yielded more information in relation to these issues.

Alternatively, schematic drawings of the face might be useful in cross-cultural studies, especially as I. E. Gordon, Zukas and Chan (1982) have presented evidence that 13-year-olds in Great Britain (n = 32), Hong Kong (n = 41) and Zambia (n = 41) can successfully discriminate between emotions when simple schematic drawings are presented. However, some additional work on sources of bias in such schematic drawings would be necessary. In Gordon et al.'s study Zambian children's decisions about which emotion was being expressed were altered by the absence of pupils in the eyes of the models.

Other cross-cultural research into emotional development has examined decoding skills. In J. E. Kilbride and Yarczower's (1976) study, an African sample consisted of 85 children from the Baganda tribe of Uganda, aged 6 to 15 years. These children's responses to stimulus cards were compared with those of a small sample of seventeen 6 to 7 year-old American children. The children were shown schematic drawings of happiness and sadness, some drawings including confounds, such as a red dress, shown in a drawing of a child with a sad facial expression. Eighty percent of Baganda children selected the happy face correctly when offered a choice between two faces, but when a third (neutral) face was included, over 40% identified the neutral face as happy. The inclusion of the neutral face made correct selection even more difficult when respondents were asked to identify which face showed sadness. Baganda children were likely to identify a person as happy if they were wearing a red dress or had their teeth

showing, even if the rest of the facial expression indicated sadness. These results occurred irrespective of the child's age. In contrast, all the American children correctly identified the required facial expression.

In another investigation of decoding skills, Borke (1973) used a story telling technique with a sample of 288 children half of whom were American and half Taiwanese Chinese, half of each group were middle-class and half boys. Borke investigated recognition of emotion in others in a cross-sectional design with children aged 3 - 6 years whom she tested at 6 month age intervals. Stories described situations which might make children feel happy, sad, afraid or angry. Besides the usual improvement in accuracy of recognition of the appropriate emotional response which occurs with increasing age, Borke obtained evidence suggesting that the ability to recognise each emotion accurately has its own time line. This time line might differ cross-culturally. Thus, in Borke's study, over 90% of the children aged 3-3.5 years perceived happy situations correctly. Many more middle-class Chinese children recognised fear at this same age than American children. American children showed a continuing improvement in recognition of sadness over time while Chinese children showed a slight decrease in accuracy of recognition of this emotion with increasing age. Anger was less reliably recognised by both Chinese and American children across the age groups, but lower-class Chinese children's recognition of this emotion remained consistently lower than that of Americans.

The decreasing accuracy in recognition of sadness seems unlikely to mean that Chinese children lose knowledge about emotions as they develop. Possibly it reflects these children's increasing knowledge of cultural requirements for labelling emotions. The same may apply to recognition of anger, especially given the salience of shame in Chinese culture. Studies by Shaver, Wu and Schwartz (1992) and Fung (1994, as cited in Russell & Yik, 1996) whose work is outlined later in the present chapter, suggest that even very young Chinese children perceive that the appropriate emotional label to apply to anger scenarios is "shame". This response option was not available in Borke's (1973) study.

Motor Behaviours and Proximity

Body posture and patterns of movement are known generally to include a learned component and to vary across cultures (e.g., Morris et al., 1979; Sogon & Masutani, 1989). A pair of studies of proximity, which while not directly measuring emotions, are relevant here, are those by Aiello and Jones (1971) and Jones and Aiello (1973). These researchers recorded proxemic behaviour of young Afro-American, Puerto Rican and White children, living in the USA, as they talked and played. Afro-American and Puerto Rican children in first grade stood closer to the person with whom they were interacting than Anglo-Americans and Afro-Americans also stood at an angle to the peer with whom they were interacting. In the follow-up study, when children were older, there were no ethnic group differences in personal space. Only the Afro-American difference in orientation toward their peer remained. A weakness of these studies, as S. Scherer (1974) has pointed out, is that the authors failed to control for social class variables and differences in the amount of space available to children in different settings in which they were observed. Scherer's own study, in which he controlled for these variables, failed to confirm the earlier findings.

Similarly, von Raffler-Engel (1978) reported that Francophone and Anglophone Canadian children show friendliness and willingness to engage in conversation through different body posture although she provides no data as to how this information was obtained. Francophone children reportedly lean forward while Anglophone children lean back. Interestingly, the Francophone children observed by von Raffler-Engel modified their posture to some extent when talking to Anglophone children, but the reverse was not true. Since friendliness is associated with positive affect, it seems likely that these differences between the two cultures in body posture represent preferred ways of expressing emotion.

Studies such as these imply the presence of affect but have not explicitly assessed the way body posture conveys emotion. It is clear that more studies are needed. Jones and Aiello's (1973) report of developmental changes suggest that studies should include children of different ages.

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Culture and the Acquisition of Emotion Language

<u>Vocal Behaviours</u>

Vocal patterns for expression of each of the basic emotions at least may be universal. It seems probable that the vocal component of this universal pattern is physiologically determined. Under the stress of emotion, it is likely that tension in the musculature of the mouth and throat alters the movement of air past the vocal cords in a way that is consistent across ethnic groups. But it is equally possible that the vocal aspects of emotional expression are affected by language, its effect on muscle tensions and positioning around the face and throat, and by what is culturally acceptable. None of these possibilities has been investigated to date either developmentally or with adult samples.

A few cross-cultural studies have looked at the decoding of content-free speech sounds. These have demonstrated cultural differences in the recognition of emotion through speech alone. Most of these studies have assessed adult decoding skills (e.g., Beier & Zautra, 1972) but one study by McCluskey et al. (1975) looked at the ability of 60 Canadian and 60 Mexican boys aged 6-11 years to recognise emotion with 24 samples of content filtered oral material. Children had to chose between sad, happy, loving and angry options. As expected, children became increasingly accurate as they grew older. Mexican children were consistently more accurate than Canadian children, irrespective of whether they were listening to a Canadian or a Mexican speaker. Thus, Mexican boys had been generally sensitised to the affective content of speech.

Research by Matsumoto and Kishimoto (1983) also showed that children from different ethnic groups have different sensitivities to information about emotion which is conveyed by the sound of the language, irrespective of whether meaning cues are available. These investigators asked 60 Japanese and 50 American children aged 4 to 9 years to indicate whether recordings of content-free speech with sounds from their own language conveyed happiness, surprise, sadness or anger. Respondents were able to indicate their choice by pointing at one of four photographs conveying the same set of emotions.

All emotions were correctly identified beyond the chance level by children from both ethnic groups, and the usual increase in accuracy with increasing age was also obtained. But for specific emotions at specific age levels some differences were found in whether correct identification of emotions occurred at levels significantly beyond chance. Japanese children aged 4 to 5, for example, identified sadness and surprise at levels beyond chance, while American children of the same age only identified surprise at beyond chance levels. By age 6, however, American children identified all emotions at beyond chance levels, while Japanese children were still unable to accurately identify anger.

When between-group comparisons were made it was found that 4 to 5 year-old Japanese children correctly identified anger and surprise significantly less often and happiness and sadness significantly more often than the American children of the same age. American children consistently identified anger correctly more often than Japanese children across all ages. No other significant between-group differences were found probably because of high levels of accuracy overall.

The findings suggest that between-ethnic-group differences in recognition of emotional content of speech occur at an early age. The extent to which decoding of the emotional tone of speech sounds is valued is also likely to be associated with cultural and ethnic group differences in encoding of emotional content into speech sounds. Children probably learn to encode such information through imitation of parental and other models but work in this area has yet to be done.

Verbal Skills
Studies of the parenting practices of various ethnic/cultural groups raise questions about the universality of emotion language learning in interaction with the parent. In some cultures, as Schieffelin and Ochs (1986) and A. L. Richman et al. (1992) point out, mothers do not talk to their infant before the child attains speech since the child is perceived as being non-verbal as opposed to pre-verbal at that time. Mothers in such cultures may have an extensive repertoire of rhymes and lullabies which they use in

interacting with their child. But the lack of situation-related verbal input into the emotional contact between mother and infant may mean that the mother and child give and receive cues to emotion in ways that are different from those in the West.

Another possible source of difference between cultures arises out of variations in who does the care-giving. In cultures where much of the infant's learning comes through interaction with an older sibling, it is possible that this person becomes the major source of verbal knowledge about emotions. There may be long term differences in concepts about emotions and emotional language as a result of this variant of child rearing practice. This is especially likely to be true for cultures such as that of the Mayans of Yucatan, Mexico where, as Gaskins (1996) discovered, parenting was mainly instrumental and siblings made a major contribution to child-rearing.

Cultural differences in the salience of certain emotions might be associated with differences in the order of acquisition of emotion language and Shaver et al. (1992) have suggested that this is the case for Chinese children's understanding of shame. These authors obtained data from 60 mothers which showed that Chinese children from Beijing understood and used shame words earlier than American children. Around 95% of Chinese children aged 2.5 to 3 years reportedly understood "xiu" which means shame or shyness whereas only about 10% of American children understood "ashamed." Fung (1994, as cited in Russell & Yik, 1996) provided some supporting evidence for these findings. Working in Taiwan, she asked Chinese parents about their children's understanding of shame. Many reported that children had a vocabulary of shame-related words including "bubaoyisi" (embarrassing), "diulian" (losing face) and "baixiu" (shy), by the age of 2.5 years.

Social class and gender differences in talk about emotions also need to be considered where cultural differences exist. For example, Eisenberg (1999) has shown that emotion-related talk may vary in relation to differences along all these dimensions. Eisenberg analysed conversations about emotions between Anglo-American and Mexican-American mothers and their 4-year-old children with both working and middle class sub-samples in each ethnic group. Conversations averaged about 20 minutes in

length. The numbers of mother-child dyads in each group were rather small (n = 20 for each subsample) but this careful study showed many differences in talk about emotions. Thus, Eisenberg reports that both Mexican-American middle-class and Anglo-American working class mothers talked about emotions significantly more than Anglo-American middle class mothers. Mexican-American working class mothers talked about emotions least of all. Mothers of all sub-samples talked about emotions more with their daughters than with their sons while Mexican-American mothers also talked more about their own and others' emotions than Anglo-American mothers who referred primarily to their child's emotions.

These few studies suggest that both vocal and verbal aspects of emotional expression probably vary cross-culturally although social class and gender cannot be ignored in cross-cultural research. However, because so few studies have been done no conclusions can be reached about the extent of such variation across many ethnic groups. Any variation is likely to be an outcome of both direct and more indirect teaching on the part of parents or other care-givers from an early age. There remains a need for much more research into this aspect of emotional expression in developing children.

Strategies Influencing Expression of Emotion

Emotion Regulation

Temperament differences in infants, such as those reported by Freedman and Freedman (1969) and Kagan et al. (1994) suggest that from the earliest days of life, infants from different ethnic groups respond differently to emotion-eliciting stimuli. A series of studies by Brazelton and his colleagues, reported by Lester and Brazelton (1982), provide some additional support for this assumption. These authors report studies of neonates from ethnic groups as disparate and far flung as the Zinacanteco of Mexico, the Gusii of Kenya, the Navajo of the USA, the Puerto Ricans and tribal peoples of Zambia. For each of these groups they report as much information as possible about the health and living conditions of the mother and details of assessment using the Brazelton Neonatal Behavioral Assessment Scale (Brazelton, 1973). The assessments were made in the first month, often in the first week, of life, with samples ranging from 5 to 157 in number.

While much of the information reported by Lester and Brazelton (1982) is concerned with motor skills and arousal levels the authors suggest that differences in emotion regulation exist from the earliest days. For the purpose of their studies, emotion regulation is defined as the infant's efforts to modulate his own state. Range of state, a measure of the rapidity, peak, and lability of state changes, is also of interest here. Both regulation and range of state vary across the ethnic groups. Zincanteco infants are described as being quietly alert for long periods, without any periods of intense crying such as are commonly observed in American neonates. Black and Caucasian infants, who formed part of the sample in Puerto Rico, showed average to poor self-quieting, that is, poor regulation of emotion, after a period of distress. Both Black and Caucasian infants were more labile than the Puerto Rican infants. Navajo infants were likely to go red when excited and to remain that way throughout the assessment, but were otherwise the most imperturbable and passive of all.

This series of studies is particularly valuable as the authors discuss ways in which tendencies towards emotional lability or imperturbability are reinforced or modified by both pre- and post-natal physical and cultural environments. They also discuss the difficulties of performing structured assessments in some cultural contexts noting that, among other things, their assessments were at times influenced by "lack of furniture... demand feeding, swaddling, and the presence of other family members and even domestic animals" (Lester & Brazelton, 1982, p.47).

Such cross-cultural studies of emotion regulation are rare, however, and very few examine a subsequent phase of development of emotion, the infant's use of social referencing. (This is described in some detail in Chapter 2). Some data (e.g., Field & Widmayer, 1981; Gaskins, 1996) suggest ethnic group differences in eye contact between mother and child from an early age. Gaskins (1996) notes that the Mayan infants in Central America are oriented towards their mother considerably less than American children are, 10% of the time as compared with 22% in her research. This lower level of visual involvement with the mother may mean that in ambiguous situations the infant has to rely on internal responses or other cues as to how to respond.

Similarly, patterns of social referencing may develop differently in cultures in which there are multiple care-givers for young infants or in cultures where siblings do a lot of care-giving, such as those described by Zukow-Goldring (1995).

There may also be between-ethnic-group differences in social referencing in cultures where children mainly interact with their mother. In one recent study (Friedlmeier & Trommsdorff, 1999) 37 Japanese and German 2-year-olds were placed in a play situation with an adult, the adult expressing distress when a toy she was using broke. Children were themselves distressed when observing the adults' response and used eye contact and physical proximity to their mother in an attempt to regulate this distress. Positive emotion regulation was deemed to have occurred if the mother responded contingently and the child was relaxed after interacting with her. Negative regulation occurred where the mother did not respond supportively and the child remained tense, or where the child did not seek help to regulate their emotional response. Results showed that Japanese children were more likely than German children to use physical proximity to the mother to help regulate their distress and less likely to use eye contact.

Possible within-country sub-cultural differences in emotion regulation have been ignored to date. In the United States of America, for example, Barbarin (1993) has noted a lack of information about the normal emotional development of African-Americans in middle childhood and adolescence. She refers to the need for knowledge about strategies used by children of this ethnicity to regulate emotion and argues that for African-Americans, many of whom lead lives of social, emotional and physical stress, the development of emotion regulation strategies may be central to adjustment.

Display Rules

Display rules, already discussed in Chapter 1 are "learned, culturally determined rules that govern the display of emotion depending on social circumstance" (Matsumoto, 1990, p. 196). Friesen, in an unpublished study referred to in Ekman et al. (1972) seems to have done the first study of the impact of display rules on emotional behaviour. In his cross-cultural study Japanese and American university students were surreptitiously recorded as they watched a distressing film. When alone, there were no real differences in the emotions which were shown through the students' facial expression. But when a

white-coated adult entered to room and also sat to watch the film, the Japanese students were much less likely to show indications of distress and instead became more likely to smile through the unpleasantness. Subsequent studies of display rules in which cross-cultural comparisons have been made have also involved university student samples (e.g., Matsumoto, 1990). While such studies confirm the existence of culturally different rules about when and to whom emotions may be shown, they do not tell about how or when knowledge about display rules is acquired.

As research reported in Chapter 1 demonstrates, Anglo-American children appear in general to have acquired knowledge about display rules by about the age of 8 to 10 years. Results obtained in Australia (M. Ainley, personal communication, October, 1997) suggest that the timetable for application of such rules may be later in this country. Such a finding would be consistent with Goodnow et al.'s (1984) study suggesting later timetables for emotional control in Australia than in the United States.

In contrast, a study by Joshi and MacLean (1994) showed early acquisition of display rules by Indian girls. In this research, 48 children in India and 48 in England responded to stories in which the models were expected to disguise their emotions in various situations. Groups were carefully matched for age, with a pre-school group of 24 (mean age = 4 years, 11 months) and a second group of 24 who were older (mean age = 6 years, 6 months). Half of each group were girls. Features of the 12 scenarios varied in terms of whether the interaction was between child and adult, or between two children. Emotions to be disguised were sometimes positive and sometimes negative.

In general, older children were more able than younger children to describe correctly both the emotion shown and the real emotion but girls were better at this task than boys overall. Correct responses were also more often obtained for scenarios in which there was adult-child interaction, and where the model was disguising a negative emotion. Indian children were significantly more accurate overall. Young Indian girls knew about disguising real emotions earlier than either young Indian boys or young English children.

Although only some explanations as to why one would disguise one's emotions could be classified, there were between-culture differences in justifications used, especially among girls. Indian girls were more likely than English girls to explain their response in terms of social rules ("because you mustn't look sad when you're given a present") and also more likely to mention the prospect of physical punishment if they did not disguise their feelings. By far the most common justification for disguising emotions offered by English girls concerned the avoidance of verbal chastisement.

Joshi and MacLean's (1994) work reveals an in-depth knowledge of Indian culture which contributed to the interpretation of their data. For other cultures, as Matsumoto and Kishimoto (1983) have pointed out, it is possible that the cultural requirements not to express an emotion might influence findings, not just their interpretation. Matsumoto and Kishimoto's findings, as described earlier in the present chapter, indicated that Japanese children consistently identified anger less accurately than American children did. While they recognise that this might be related to developmental issues, they also suggest that it could have occurred because of a display rule preventing acknowledgment of this emotion in the presence of an adult.

In addition to cross-cultural variation in the actual display rules themselves, it seems quite probable that the requirement to apply display rules might vary within ethnic groups. A child might be permitted to show an emotion in a certain way up to a culturally determined age, in specific contexts, or under specific types of provocation. For example, D. G. Perry, L. C. Perry and Weiss (1989) reported that 10 year-old American children expect less disapproval from parents for aggression in response to provocation than is the case for unprovoked aggression. Social rules, however, permitted the display of more aggressive behaviours towards boys than girls.

An interesting question relating to display rules concerns the extent to which members of a cultural group recognise the presence of an emotion in another member of their group, even when that person has applied culturally relevant display rules. For example, did the white-coated adult viewing the distressing film with the student in Friesen's study (as cited in Ekman et al, 1972) have any idea of the intensity of the student's emotional distress? If so, what cues was he attending to? Perhaps the smile of distress

differs from the smile of happiness in ways which only Japanese are sensitised to. Alternatively, as Matsumoto (1989) has suggested, the lack of response may arise out of an actual lack of perception of the other's emotion. This latter possibility requires more study, probably including some psychophysiological assessment of arousal, perhaps measurement of galvanic skin response or CNS activity.

Conclusion

While it is evident that differences in expression of emotion, verbally and non-verbally, are associated with ethnic group membership it is equally evident that at present our understanding of how these differences develop and are maintained is limited. Cross-cultural research into this aspect of child development is rare. It seems mainly still to occur in on the basis of chance coincidence of interest and place of residence of the researchers. In particular, studies of how encoding of emotion is taught and learnt in countries outside the first world are lacking and there is a need for much work in cultures in a wider range of countries than has been done to date.

CHAPTER 4: CULTURE CHANGE AND CHILD SOCIALISATION

Gardner's claim, made in 1974, that "the developmental psychology of today is the story of the development of Western children" (p.271) remains true today, although it might also be true to say that while a great deal is known about American child development much less is known about the development of children in other first world countries, including Australia. In addition, very little is known about child development as it relates to either traditional or modern socialisation practices in non-Western regions of the world (Nsamenang, 1992).

The present study addresses this issue with regard to one aspect of child development, that of emotional expression. Respondents in the sample came from three non-Western countries, India, Hong Kong and Turkey, and one Western country, Australia and the present chapter outlines information about child-rearing in these four countries only. The rationale for selection of these four countries as a source of respondents for the study centres around the fact that adult in these countries show differences in broad culture level values and these differences are reflected in their behaviours (Hofstede, 1980). A person who behaves in ways that are consistent with the values of their culture is considered to be culturally competent and the goal of child-rearing is to produce a new generation which has desired competencies (Berry, 1976, 1994; Ogbu, 1981). Each culture's definition of competence differs from that of other cultures and influences parental goals for child development and child-rearing practices (Kagitcibasi, 1996). It seemed likely that children in the four ethnic groups selected would show differences in emotional expression despite the fact that all were resident in Australia, since culture of origin values continue to influence the behaviour of immigrants in their new host society (Dion & Dion, 1996; Hearst, 1985; Wood, 1980).

An additional constraint, which also influenced selection of groups, was that the study included non-Western ethnic groups resident in Australia. The ethnic groups selected had to be resident in Australia in sufficient numbers to permit an adequate sample to be obtained. Obviously, this constraint excluded some groups and these are not considered further. (Details of actual selection procedures are presented in the section entitled "Ethnic groups selected for study" in Chapter 5).

Culture changes constantly in response to changes in the physical, social and political environment (Williams, 1980; Ogbu, 1981). In all cultures some respond positively to change and take on modern ideas, while others prefer to retain more traditional values and behaviours. Women in all four ethnic groups, but more especially those women from India, Hong Kong and Turkey, have been exposed to rapid change in their cultures of origin and have not necessarily responded to these changes in the same way. The terms, "traditional" and "modern," contrast responses to culture change.They are used extensively in the remainder of the present chapter to refer to patterns of family interaction. The two terms have been widely used in this context but remain poorly defined. In general, "modern" appears to mean that the parent's knowledge, values, and behaviours have been modified as a result of exposure to the knowledge, values and technology of first world countries while "traditional," as might be expected, refers to patterns of thought and behaviour which have existed within the home country for many generations.

Information about the introduction of modern child-rearing practices and maintenance of traditional practices in each ethnic group is of some importance in relation to the present study. Australian Bureau of Immigration, Multicultural and Population Research (BIMPR) information about recent migrants from India and Hong Kong (BIMPR 1995a, 1995b) suggests that sub-samples drawn from these groups would include large numbers of well-educated middle-class immigrant women whose values and behaviours may have been influenced by modernity. In contrast, Turkish immigrants have been drawn from a less well-educated group (BIMPR, 1995c) and might be expected to hold more traditional ideas about child socialisation. Differences along these dimensions might influence child-rearing behaviours and hence, children's expression of emotion.

Traditional and modern socialisation practices used in the four ethnic groups under investigation in the present study are described in the following sections of the current chapter. Where information is available, socialisation of emotion is specifically referred to. Because the parenting might also change as a consequence of residence in a new host society the relationship between acculturation, parenting and parental concerns about children's development is also considered.

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Culture Change and Child Socialisation in Four Ethnic Groups

Information available about the socialisation of children in countries of interest in the present study is often suggestive of possibilities rather than being based on more scientific data. For example, Khatri (1970) discussed changes in Indian society which resulted in more egalitarian family structures, and increased spontaneity compared with more traditional families. This was accompanied by an increase in the value of daughters and in family intimacy. Similarly, Sumer (1970) described the modern Turkish family as retaining a modified version of the patriarchal structure while at the same time promoting education for girls and marriage based on "love, mutual respect, equal rights and self-determination" (p.427). Information about the precise ways in which increased this intimacy and valuing of girls are conveyed by parents is not available.

Along with the general sparsity of knowledge about child development in Australia, India, Hong Kong and Turkey is a sparsity of information about emotional development. It is possible that clues as to what patterns of emotional expression might be expected in children from each ethnic group can be found in reports about cultural values and goals for child development. Where culture change has been rapid, evidence for continuity of, or change in, parenting goals and socialisation practices will provide additional guidelines to current development of emotions. It is therefore useful to consider broader aspects of both traditional and modern socialisation in the ethnic groups of interest to the present research.

Traditional Values in Relation to Child Socialisation

At the broadest level, the cultures of the four ethnic groups in this study vary along the dimensions of Individualism-Collectivism, Power Distance, and to a lesser extent, Uncertainty Avoidance and Masculinity-Femininity as identified by Hofstede (1980). The three migrant groups are especially high in collectivism as compared with the dominant Anglo-Australian group which was the second lowest on this dimension in Hofstede's study. (A more detailed description of these dimensions has previously been given in Chapter 3).

Associated with these differences between the migrants and the Anglo-Australians are likely to be differences in the sense of self. It has long been recognised that Western patterns of parenting promote the development of individuals with a sense of themselves as autonomous beings, separate and independent of others. This autonomous self has relatively fixed impermeable boundaries with the result that the person with this sense of self is likely to behave consistently across settings (Roland, 1988; Kagitcibasi, 1996). Australian patterns of parenting, although little investigated, are consistent with this Western pattern and can be expected to promote the development of this sense of self.

The autonomous self has been contrasted with a more flexible self, with permeable boundaries. The behaviour of persons with this type of self is likely to be more influenced by the setting or context in which the person finds him/herself. This kind of self has been called the "we-self" or "familial self" or in some instances the "social self". Central to this variant of the self is a sense of connectedness to others, especially family members, and a sensitivity to their emotions and needs. The sense of self as connected develops in the cultures which Hofstede (1980) has designated "collective", and has been shown to exist among Turks (Kagitcibasi, 1996), Chinese (Hsu, 1971) and Indians (Tripathi, 1988; Roland, 1988).

Other similarities in cultural values of the migrant groups also exist. All three migrant groups have traditionally valued boys more highly than girls. This is shown by a prolonged period of dependence for boys which, among traditional members of Indian and Turkish communities, even includes an extended period of breast feeding (Devasia & Devasia, 1991; Khatri, 1970; Sumer, 1970), and generally indulgent socialisation of boys for the first several years. The mother-son relationship among Indians and Turks has been described as the central relationship within the family and one which may be crucial for the mother's longer term well-being (Kandiyoti, 1977; Kiray, 1976; Roland, 1988). The period of indulgence, though prolonged, comes to an abrupt halt at around the age of 4 - 6 in traditional Indian and Chinese families, with a sudden increase in expectations for much more mature behaviour. This occurs because of the Hindu developmental timetable which describes children of about this age as having reached the apprenticeship stage, ready to learn in more structured ways (Kakar, 1979). Among the Chinese it is believed that a child of this age is able to reason and be reasoned with

(Mak & Chan, 1995). For Turkish boys circumcision at around the age of 3 to 6 years is seen as an initiation into manhood (Fisek, 1982) and is likely also to be associated with increased expectations of mature behaviour, although this has not been documented.

The socialisation of Chinese girls, while less indulgent than that of boys, also shows a shift in expectations at the same age as boys. Indian and Turkish girls seem to experience less dislocation at this time, but their socialisation has traditionally been one of constantly increasing demands for compliance and helping behaviours (Anandalaksmy & Bajaj, 1981; Kagitcibasi, 1984; Kapur, 1995; Sumer 1970).

Among all three collectivist groups the maintenance of group harmony is important. Chinese and Indian boys and girls have traditionally been socialised to be moderate in their behaviours and to show responses indicative of harmony even when none exists. This may involve use of strategies such as avoidance of confrontation and the use of intermediaries in situations of conflict (Sinha & Tripathi, 1994; Mak & Chan, 1995).

All three of the cultures from which these migrants are recruited are hierarchical in nature. Children and junior members of the community are expected to show deference and respect towards elders and to conform to family rules. This requirement is said to result in reduced striving for autonomy and an anxiety about non-conformity (Bisht & Sinha, 1981; Fisek, 1982; Khatri, 1970; Kagitcibasi, 1996; Ho, 1996; Wu, 1996).

It is possible, however, to overemphasise the similarities between the three migrant groups to the exclusion of real differences. For example, religious and ethical beliefs (which may be culturally pervasive irrespective of whether an individual adheres to the belief system itself) are associated with broad cultural level differences in values and thinking. Thus, in Hinduism there is great flexibility in both beliefs and behaviours which appears to be associated with a flexibility in the we-self so that an individual is able to hold conflicting ideas without dissonance and to respond to each context in terms of its demands (Roland, 1988; Sinha, 1988; Sinha & Tripathi, 1994). It is possible that learning how to accommodate such opposing values and beliefs carries its own

component of anxiety for Indian children. Such anxiety might be greatest during the primary school years soon after the shift from total acceptance to a demand for culturally acceptable mature behaviours.

The Chinese tradition is quite different with one major source of beliefs having the greatest impact on child-rearing - the Confucian ethic. As expected then, one more clearly defined set of beliefs and expectations about behaviours exists among traditional Chinese. Similarly, Islam apparently also provides one set of beliefs about correct behaviour for Turkish people although Sumer (1970) has suggested that regional variations in preferred personality type moderate the expression of these core beliefs with resulting differences in behaviour.

Again, there is a difference between Indian and Turkish beliefs about the pervasiveness of core cultural values. Indian writers describe an overwhelming sense of Indian-ness which they believe pervades the whole nation, irrespective of surface regional differences and caste status (Khatri, 1970). This is said to be less clear in Turkish society where, as noted above, marked differences in values can be found depending on the social setting - tribal group, village, small town or larger metropolis (Sumer, 1970).

In contrast to these migrant groups of Indian, Turkish and Chinese parents, Australian parents live in a culture which values high levels of individualism and low power distance. In this regard the majority Australian culture is similar to the prevailing culture in the United States of America (Hofstede, 1980). Possibly because of this similarity there have been few studies of normal child development in Australia, it is assumed to be the same as that of children in the U.S.A. Australian parents are assumed to be egalitarian and child-centred, and to promote the development of independence in decision-making and thought.

Child Socialisation in the Late 20th Century

Australia. Since the 1970's there have been a number of changes in Australian culture which might be expected to have an influence on child socialisation. These include an increase in female participation in the work- force, a reduction in time spent on housework and increased male participation in child-care. A greatly increased rate of

divorce means that about one in five families are now being raised by a single parent, usually the mother. Nearly half of single-parent families live in poverty (Burns & Grieve, 1999). Although little is known about how these changes have their effect Poole and Goodnow (1990) have noted that poverty and the stress in the family which results from it detrimentally influence the self-esteem and self-perception of Australian children and adolescents. Other research, outlined by Funder et al. (1996), has had a more sociological focus and has been primarily driven by government social policy. It has investigated issues of the day (e.g., access to and impact of child care; transition of young people from school to work) rather than psychological development per se.

The few psychological studies have shown that Australians' egalitarian values influence parenting. Bowes and Watson (1999), for example, cite some unpublished research by Bowes, Chen, Li and Li, in which middle-class urban parents were shown negotiate with their children over domestic issues such as who should tidy up a mess. Studies also show that, like parents elsewhere, Australian mothers and fathers interact with their children in different ways. Thus, G. Russell and A. Russell (1987) and A. Russell (1997), who observed the parenting of 6- and 7-year-old children, reported that Australian mothers were more involved with their children, more emotionally positive towards them and more committed to child-care tasks than fathers. They also negotiated more with their children. Fathers, on the other hand, showed more warmth and playfulness towards their children than mothers. Both parents responded more negatively towards sons, even when the frequency of misbehaviour on the part of boys and girls did not vary. Fathers, especially, responded negatively towards sons' dependent behaviours.

Parental modelling of gender-related differences is reflected in early and marked separation along gender lines. By the time children begin primary school boys play only with boys and girls with girls. Boys' groups strongly reject girls and girlish things describing girls as boring, weak, dumb people who cry when teased, are not as strong as boys, and cannot run very fast (Clark, 1989). Clark noted these stereotypes even existed among 8-year-old boys in a school in which one girl was the under-eight world BMX champion. Quite young girls who talked to Clark understood that boys meanness towards them was required by the cultural definition of masculinity but this pattern of

interaction can be detrimental to girls' development. Boys who participated in Clark's study described themselves as active, good at sport and keen fighters. They also described themselves as not talking much. Girls said they talked about feelings, family and problems.

Australian children have commented on their relationships with their parents in studies by Amato (1987) and, more recently, by the Dangar Research Group (1999). These studies, like that of Clark (1989), give indirect clues as to socialisation practices and goals. Amato obtained information about family life from a sample of 89 boys and 106 girls of primary school age. In general, children described their parents positively, said they spent a lot of time talking to their parents and were satisfied with the amount of time and help their parents provided. On the other hand, it was noticeable that fewer boys than girls (57% compared with 70%) believed their fathers were interested in them. Fewer girls than boys were satisfied with the amount of time their father spent with them (47% compared with 62%) and both girls and boys were much more likely to say they were satisfied with the amount of time their mother spent with them. Seven percent of girls described their mother in negative terms while 11% described their father negatively. Both mothers and fathers were described negatively by 17% of boys.

Parental anger was said by these children to be expressed through yelling, hitting, isolating the child in his/her bedroom or restricting access to television. General patterns of child management varied slightly in association with marital status. For example, single mothers exerted more control over their child than mothers in intact two parent families, working mothers punished their children less than those not working outside the home although their husbands punished children more. Children in larger families experienced fewer opportunities for independent decision-making than those in smaller families.

Quite specific information about what parents did when interacting with their children was obtained in the Dangar Research Group (1999) study in which 400 Australian children aged 8 to 15 years were asked about their perceptions of the ways parents were raising them. Around 75% of the children reported that their parents showed they cared for the child through praise, spending time with the them and helping the them to do

things. Sixty-four percent showed care by providing special treats or presents, trips or visits, and more than 50% gave hugs, cuddles or kisses, said general nice things, including that they cared for the child, or gave extra spending money.

Tolerance, flexibility, and independence are also being modelled in Australian families. Most parents were perceived as being tolerant about children's adherence to rules. Although fairly strict in their demands that children keep their rooms tidy, and in wanting to know where the child was going with friends and when, most parents were not very strict in controlling how the children wore their hair or what clothes they wore. They also permitted quite a lot of independence in choice of reading material, TV viewing and choice of friends. Differences between younger and older children were few and parents were perceived as being more firm with older children (12 - 15 year-olds) in relation to smoking, alcohol use and curfews. When problems arose, as they did between most children and their parents once or twice a week, over 75% of parents used reasoning and most chose rational approaches to punishment such as removing a privilege or sending the child to his/her room. These behaviours show that parents value rationality and negotiation within family relationships, although, of course, some parents still yell and scream and occasionally hit.

The children appeared to be responding as desired to what they saw their parents as modelling. Almost all 8- to 11-year-old children in the sample thought adults were kindly and caring, 91% of them said adults take time to answer questions and explain and most agreed that adults set a good example for children. On the other hand, 34% thought adults did not listen to children properly and 18% thought adults were hurtful towards them.

These optimistic reports from young children contrast with the results of D. A. Rosenthal, Bell, Demetriou and Efklides' (1989) study of Australian values which also gives indirect cues as to socialisation goals. D. A. Rosenthal, Bell et al. asked 20 Anglo-Australian families what qualities they thought were important in adults, what aspects of culture they valued, and what behaviours were shown by ideal mothers and fathers. In each family the mother, the father and one adolescent child were interviewed separately.

Both adolescents and their parents considered that, besides producing persons who were "good", respected and decent, considerate, happy, independent and assertive, socialisation should also produce people who were successful and attractive to others. Having a good life with material security were mentioned more frequently as things Australians valued than were family, cultural heritage or freedom. Ideal fathers were primarily expected to provide for their child's physical needs, with much less frequent mention of involvement in the family or in child-rearing. Very few mentioned that the ideal father should be loving towards his family. Mothers were perceived as responsible for raising the children properly (undefined), for being available when needed and meeting the child's physical needs. In another study, also of adolescents, D. A. Rosenthal, Demetriou and Efklides (1989) reported findings suggesting that Anglo-Australian fathers of adolescents were poor at negotiating during conflict, taking a rigid authoritarian position. Although these authors restricted their study to parents of adolescents it seems likely that these paternal behaviours would also have occurred during earlier phases of family life.

The picture these studies suggest is unbalanced. There appears to be concern and emotional involvement with younger children, although gender-related differences in behaviours are emphasised. But there may be a too rapid reduction of emotional engagement as children move towards adolescence. It is clearly impossible, however, to generalise from these few studies. They confirm the need for much more research into child development in the families of normally developing Australian children. In particular more observations of actual parent-child interaction are needed to supplement the survey findings obtained to date.

India. Kumar (1993) has stated that while there is a "respectable" number of studies of child development in India there is still no coherent body of knowledge. Sinha and Mishra (1993) have also noted that research has focused on the development of cognitive skills during the primary school years, and that little work has been done with infants and pre-school-aged children. Such research tells little about socialisation.

Societal values give some idea of goals of child-rearing. Thus, Punetha (1991) has described Hindu society as having a culture of non-violence and non-aggression.

Women have traditionally been expected to be submissive, docile, obedient, subservient and respectful, while men have been expected to be formal, impassive and detached, especially in relation to their children (Tandon, 1981). In the hierarchical joint family children are expected to be obedient and respectful and to learn to conform and co-operate. In the modern nuclear family children are allowed to show more independence and self-assertion (Bisht & Sinha, 1981). Clearly, parents who hold these values will behave in ways that promote development of the same values in their own children.

Research that provides clues as to how values and behaviours are instilled in Indian children comes from various perspectives. Roland (1988), for example, writing from a psychoanalytic perspective and basing his conclusions on case material, states that even today Indian children are regarded as "innocent, pure and godlike" (p. 262), until the age of about four or five, their behaviour having few implications for the future. During these early years behaviours that are considered to be undesirable are dealt with by distraction and gratification or by nonverbal expression of altered affect in the mother. Although social rules are being taught to young Indian children during this period, there is likely not to be a high level of concern about inappropriate behaviour, including emotional expression, at this time. But there is a sudden change in expectations at about four to five and later development contrasts markedly with early high levels of satisfaction and acceptance of the child. Subsequently, emotional behaviours which reduce group harmony elicit strong negative, but often non-verbal, sanctions. As is common in other group oriented societies, anger elicits particularly strong responses and children learn that direct expression of anger, especially towards those older than themselves, is expressly forbidden. In Indian society where context determines behaviour, angry feelings may then be displaced either directly or in the form of bullying, towards younger siblings or other children. Girls' expression of anger is even more restricted than that of boys. These restrictions on expression of anger are associated with a pattern of somatising psychological distress. Attempts to express anger directly towards adults, especially the father who is often a rather distant figure, elicit strong feelings of anxiety in the child (Roland, 1988).

Regional differences may occur. Kurian and Ghosh (1983), for example, report research from the state of Orissa in India showing that "modern" mothers spent more time

helping their children to do things rather than just leaving them to occupy themselves as had been the traditional pattern. In Kerala, these authors report, children are expected to be kind to smaller creatures (children and animals), to avoid quarrels with other children and not to be mischievous, and are presumably socialised in ways that promote these behaviours.

Just a few formal studies of the socialisation of Indian children have been reported. One of these is that of Mukerjee and Ganguli (1984) who investigated differences in mother child interaction which are associated with the Sikh and Hindu religions. They recorded two 20 minute periods of interaction of 50 Sikh and 50 Hindu mothers with their children. Interactions took place in a playroom that was well supplied with toys for the child, and with magazines for the mother if she wished to use them. Subsequent analysis of the data assessed expression of positive and negative feelings, and other features of the interaction such as the extent to which the mother restricted, praised, criticised, ordered, suggested, and interfered with the child's activity. Inter-rater reliabilities for the 15 measures were in the range .74 to .84. Significant differences were found on 10 of the 15 measures with Sikh mothers higher on 8 out of 10. Interestingly, Hindu mothers, who were more likely to leave their child to do as he/she liked, expressed more positive feelings when the child demanded attention. Sikh mothers on the other hand were more involved with their child, were more critical and expressed more negative feelings.

Joshi and MacLean's (1997) study of maternal expectations of child development among mothers from India, Japan and England is another study which has provided information about mothers' specific beliefs and expectations for their children's development. A questionnaire listing 45 competencies in 6 domains (education/self care, compliance, peer interaction, communication, emotional control and environmental independence) was administered to 50 Indian, 70 English and 50 Japanese mothers. Mothers were asked whether they expected the child to have mastered the skill before age 4, between ages 4 to 6, 6 to 8, 8 to 10 or beyond 10 years.

Indian mothers expectations were later than both English and Japanese mothers for all domains except environmental independence. Indian mothers' timetables also suggest more flexibility in the culture for developmental timetables. For instance, between 80

and 90% of Japanese and English mothers expected their children to have mastery of education/self-care skills (e.g., Counts to 10, Eats without help) at the age 4- to 6-years in contrast to just under 40% of Indian mothers. Among Indian mothers, 26% expected mastery of these skills at 6- to 8-years, and 34% at 8- to 1-years.

Like mothers in other ethnic groups Indian mothers reported a sequence for acquisition of skills. For example, they expected early development of education/self care skills with emotional control (detailed in Chapter 3) expected much later in the developmental sequence.

Turkey. If little is known about socialisation of children in India even less is known about child development and socialisation in the Turkish community. Turkish psychologists themselves find it difficult to access information about this aspect of psychology (D. Albayrak Kaymak, personal communication, July 15, 1997). Indirect evidence for goals of child-rearing is provided by Levine (1982) who states that traditionally men have been expected to be masculine and virile, strong and powerful, unafraid, independent and unemotional, and interested in things rather than people. Women in contrast have ideally been weak, passive, helpless, submissive, dependent, emotionally expressive and interested in people rather than things.

Kagitcibasi's (1982) report on the value of children provides further evidence for child-rearing goals. A huge sample (n = 2305) of both men and women from rural and urban settings participated in the study. The parents wanted different things for their sons and daughters. Over 50% wanted sons to be good parents and to be respectful and loyal towards them, while only 34% had this goal for girls. Instead, they wanted girls to be good spouses and have a happy marriage. Only 12% of parents valued these latter goals for their sons. Both men and women wanted their children to provide financial and practical help, particularly in the parent's old age.

Values varied with education, gender of parent and, among women, whether the mother was employed or not. Economic and utilitarian values decreased with increasing parental education, although old age security remained salient unless parents had university education. Working mothers were also more likely to endorse utilitarian

reasons for having children while those who were not employed enjoyed their children's companionship more. These findings are consistent with other reports which have noted changes in family life of modern, better educated families, including a move away from complementarity in roles towards increased egalitarianism and democracy (Levine, 1982).

Various authors have commented more directly on child-rearing practices although often without providing supporting evidence for their statements. Thus, traditional village families have been described as practising a controlling protective style of parenting in which moves towards autonomy are discouraged and obedience to authority is emphasised (Fisek, 1982; Hearst, 1985), a style of parenting which continues when these families migrate to the fringes of the major cities (Kagitcibasi, 1996). Fisek states that traditional methods of discipline involved shaming and scaring, with threats of castration or calling on the supernatural. The discipline is inconsistent and based on parental moods, not on verbal reasoning. Kagitcibasi has also noted that children in these families are expected to learn through imitation, without much verbal instruction and with little praise. Accompanying this low level of verbal interaction is a pattern of nonverbal communication which includes intense eye contact and close proximity (McWhirter, 1983).

Good behaviour as reported by mothers in Kagitcibasi's (1996) study was mostly relational. Mothers greatly valued occasions when their child was "good" to them. Showing affection, being obedient and getting along well with others were also important. In contrast, the behaviour of interrupting adults when they were talking was described as "absolutely not tolerated" by 73% of the sample. Kagitcibasi also discusses the Turkish word "uslu". A child who has the characteristics described by this word is good mannered, obedient, quiet, not boisterous, not naughty. Girls especially should have this characteristic.

Although there is no specific information available about the socialisation of emotion in Turkish families, one study of the emotion lexicon of Turkish university students provides some indication of possible socialisation practices. The research, by S. T. Smith and K. D. Smith (1995) involved a sample of 200 students who were asked to

spend a few minutes listing exemplars of the word "emotion". Of interest in relation to the socialisation of emotion was the tendency of these students to include what in Anglo-American cultures would be seen as situational antecedents of emotion (e.g., soccer games, exam results) in their listings. Behaviour associated with emotion was also considered a central part of the emotional experience suggesting, according to the authors of the study, that Turkish people are socialised to have holistic emotion concepts. Another study (Frijda, Markham, Sato, & Wiers, 1995) using the same approach has suggested that love (sevgi) and hate (nefret) may have a special role in the Turkish emotion lexicon. These terms were each listed by 80% of a Turkish sample, much more frequently than they were mentioned by comparison groups in Europe and Asia. Such a preference is also likely to be an outcome of socialisation practices.

Apart from these studies, the general values of Turkish culture, together with the broader features of this Islamic and collectivist society, suggest that boys and girls will be taught different ways of expressing emotion, with boys being permitted a wider range of emotional expression than girls, and perhaps a greater intensity of some emotions. While the collectivist emphasis on group harmony might suggest that strong negative emotions are not fully expressed the salience of hate reported by Frijda et al (1995) suggests the possibility that other features of the culture might permit expression of strong emotion.

Hong Kong. Information about the Chinese generally suggests that traditional beliefs also continue to inform Chinese parenting and socialisation of children. Core Chinese values of harmony, respect and filial piety towards elders and achievement of prosperity are still actively taught in modern Chinese families (Fang, 1988; Mak & Chan, 1995). This happens despite a shift from traditional activities and lifestyles and in Chinese communities around the world (Ho, 1996; Wu, 1996).

Two studies of Hong Kong Chinese families have looked at changes in child-rearing practices in some detail. These have suggested that only limited change is occurring in Chinese culture in the ways in which parents and children interact. Ho and Kang (1984) compared child-rearing attitudes and practices in Hong Kong among two generations. In the first of two studies reported in their 1984 article they chose 17 pairs of grandmothers

and mothers from the same family. Grandmothers had typically been brought up in China and had limited education, in contrast with the better educated, Hong Kong raised, mothers. Sears, Maccoby and Levin's (1957) Interview Schedule which has questions about caretaking in infancy, feeding, toilet-training, training in modesty, restrictions and demands, control of aggression, permissiveness for dependency, gender-role differentiation and patterning after own mother was used. Mothers' and grandmothers' approach to parenting was reportedly much the same across these domains. Of interest in relation to the present study was a continued emphasis across the generations on control of aggression. The authors noted that "maternal tolerance of aggressive expressions was uniformly low" (p.1007) with all 17 mothers rating themselves "Not at all permissive" on items measuring this dimension of parent-child interaction.

The second study reported in Ho and Kang's (1984) article is one in which the attitudes of 20 pairs of grandfathers and fathers towards aspects of child-rearing were investigated. Using scales developed for the study the researchers asked questions about beliefs about child rearing and filial piety. As might be expected grandfathers showed some more traditional attitudes. Grandfathers' belief that the "age of understanding" was around 6 years was consistent with traditional values, while the fathers, who had been more involved in child-rearing realised that children understood a great deal at an earlier age. Surprisingly, under 20% thought moral character was the most important characteristic for the child to have when it reached adulthood, sociability and a controlled temperament were each rated most desirable by about 5% of respondents in both generations. The main emphasis was on achievement-competence in contrast to the traditional Chinese emphasis on moral behaviour and the need for moderation in the expression of emotion. These socialisation goals may reflect differences in the culture and values of Hong Kong Chinese as compared with those from the Peoples' Republic of China.

In both of Ho and Kang's (1984) studies most of the grandparents lived with their adult children. Inter-generational differences in values and behaviours related to child-rearing seem likely to be less with this type of family structure than when grandparents live

apart from adult children. It would be interesting to see a study which involved comparison of values in this extended family structure with that where parents and grandparents lived in nuclear families.

In relation to emotional expression, a traditional emphasis on moderation remains strong. Wu (1982), for example, quoted from a revered Chinese medical text to the effect that "The emotion (sic) of joy and anger are injurious to the spirit .... when joy and anger are without moderation, the heat and cold exceed all measure and life is no longer secure" (p.288), noting that modern values still deem moderation in the expression of emotion more acceptable than a full display. Wu (1996) has also noted that as a result of this moderation Chinese children learn to look for non-verbal clues to emotion, especially where negative emotions are involved.

One study of emotion in the Chinese context was undertaken by Potter (1988), an anthropologist working in the Peoples' Republic of China. Potter suggested that for the villagers whom she studied in China emotion was not of central importance. When asked about events which might elicit a strong emotional response, these adults were likely to say "How I felt doesn't matter" and to then report what they did. Such reports are consistent with the Confucian value on work, and with related literature showing that among the Chinese emotion is revealed through work. Thus, emotion is less salient than in the West and this, too may influence the ways in which parents respond to expression of various emotions on the part of their children.

Potter (1988) points out that when parents are dealing with an inappropriate display of emotion, (e.g., anger), they do not name the emotion directly, but instead concentrate on what the child has done, discussing it within a moral framework. A Hong Kong Chinese informant told Potter that inappropriate expression of emotion, such as tantrum behaviour in small children, which is unlikely to lead to harm to anyone is consistently ignored (This parental response was also frequently observed by the present author during a two year period of residence in Hong Kong).

More specific studies of Chinese children's understanding about emotion have focused primarily on the development of empathy. While these studies make an important

contribution to our understanding of emotional development they are beyond the parameters of the present study and will not be discussed. Other studies, such as those of Shaver et al. (1992), Fung (1994, as cited in J. A. Russell & Yik, 1996) and Borke (1973), have investigated the development of emotion language and decoding of information about emotion. These have been outlined in Chapter 3. Results strongly suggest differences between the socialisation of emotion in Chinese from a number of countries and Anglo-American families, but have not yet looked at the process.

Conclusion. Little that is specific is known about Anglo-Australian child-rearing practices. Studies from India, Turkey and China suggest that socialisation practices employed by parents in the late 20th century reflect both the continued valuing of aspects of tradition and changes associated with modernity in the culture. Where emotion has been studied there are differences between the ethnic groups, most of which appear to derive from long held values and socialisation practices. These studies have looked at members of the ethnic groups in their home country, but participants in the present study have also experienced changes associated with migration. This form of culture change is called acculturation.

Acculturation

Acculturation is a process that occurs when there is contact between members of different groups over time, such as occurs when people migrate to a new country. The term was first defined by Redfield, Linton and Herskovits in 1936 when acculturation was described as "those phenomena which result when groups of individuals having different cultures come into continuous first hand contact, with subsequent changes in the original culture patterns of either or both groups" (p.149). In 1960 Oberg coined the term "culture shock" to describe the strong negative responses of anxiety, frustration and disorientation, which, he believed, occurred whenever people found themselves living in a new culture. This term has subsequently been replaced by the more neutral phrase "acculturative stress" (Berry & Annis, 1974), which acknowledges the challenging and sometimes distressing nature of the process without overemphasising its negative outcomes.

Normal responses to the experience of living in a new host culture include a reconsideration of one's values and culture of origin, accompanied by a sense of isolation, fatigue and loss (P. B. Smith & Bond, 1993). An individual is more likely to be able to cope with these if he or she has ways of managing stress, has the capacity to establish relationships across the cultural divide, and can establish dialogue with members of other ethnic groups despite the inevitable miscommunications (Hammer, 1987). Berry et al. (1992) note that if the person is well-educated, of higher socioeconomic status, speaks the language of the host country, has had previous experience with other cultures and is experiencing less rather than more social isolation they are likely to experience less stress. Ward and Kennedy (1993) have also found that an internal locus of control is associated with less acculturative stress. A person without these characteristics, or one who has grown up in a relatively fixed, stable culture or a culture which is extremely unlike the new host culture, may find the acculturative experience more stressful and conflict ridden and may be prone to more physical and psychological health problems (P. B. Smith & Bond, 1993). Acculturation is, therefore, now known to be more or less stressful depending on pre-contact experience and knowledge of both the acculturating individual and members of the host culture, the contact experience itself and on the psychological and social skills of the person meeting the new host culture, for the purposes of the present study, the migrant.

A few studies have examined intrapersonal and social characteristics associated with successful or less successful acculturation in relation to the groups of interest in the present study. For example, Naidoo (1984) looked at the responses of 219 women who replied to questions on a "Culture Stress" scale she had developed. Her aim was to discover what contributed to stress and adjustment during the acculturation process for Indian sub-continent women living in Toronto, Canada. Results showed that factors facilitating adjustment were belief in self and determination to succeed in Canada, knowledge of English and of Western culture, and the respondent's perception of her husband and Canadian neighbours as helpful and supportive. Women who were less stressed also kept themselves busy in home and community. Having a fatalistic attitude toward life events was much less important than any of these characteristics.

Associated with higher levels of stress were low socio-economic status, traditional life-style (e.g., arranged marriage), low contact with women in the general community and limited knowledge of English. More psychological values mitigating against conflict-free acculturation were clearly separate male-female roles, a reported highly protected adolescence during which being female was associated with inferiority, perception of more value differences between home and Canada and an unwillingness to change towards a more Canadian way of life.

Naidoo's (1984) study confirmed the importance for these Indian women of pre-migration exposure to Western culture for adaptation to the host culture. Other studies in Canada have suggested that even well-educated Indian women who migrate become the keepers of some traditional values (Naidoo, 1980; Siddique, 1983). This role, as well as the response to acculturative stress, may influence parenting and thereby also child behaviours.

Evidence of pre-migration awareness of, and accomodation to, differences between Chinese and Western knowledge and values has also been shown among Hong Kong Chinese in research by M. H. Bond and King (1985). These authors asked 118 respondents about Westernization, modernisation and Chinese values. Respondents made a clear separation between Western technological skills, which they accepted as useful and necessary in the interests of modernity, and Western values, which they rejected. Where respondents acknowledged that they were westernized to some degree they confined this westernization to psychological externals such as acting in a more extroverted way than has been traditional, or having English language skills. At the same time they maintained core Chinese values such as filial piety, frugality and respect for teachers. The psychological adjustments made while living in a mixed Chinese-Western culture in Hong Kong almost certainly reduce acculturative stress, easing Chinese women's adjustment to living in Australia, and influencing child-rearing after migration.

On the other hand, studies of the Turkish women who worked in Germany during the 1970's and early 1980's suggested they had had few or no experiences that might promote successful acculturation. They were predominantly from Turkish villages,

typically had little or no formal schooling and were often isolated from the social supports that had been available to them at home. Abadan-Unat (1982) noted that the potential for greater equality between Turkish men and women working in Germany was undermined by the "overwhelmingly traditional orientation of the Turkish migrant abroad" (p.219). This author also reports the findings of research by the German government which showed women had very high levels of anxiety and associated psychophysiological indicators of stress such as sleeplessness, lack of appetite, chest pains, head and back aches. They were also more likely than men to experience a psychotic episode. Onset of stress indicators was often triggered by some unpleasant experience such as a car accident or bad news from home.

The information about traditional and modern cultural values and goals for child-rearing and the studies of Naidoo (1984), M. H. Bond and King (1985) and Abadan-Unat (1982) all suggest that there will be maintenance of core cultural values, beliefs and child-rearing practices in migrant families in Australia. Turkish mothers may hold more strongly to traditional beliefs and may also be more stressed than Indian and Chinese mothers because they have had less preparation in the skills required for successful acculturation. This may influence the degree to which they are concerned about their children's development.

Acculturation and Parental Worry/Concern

Like acculturation, worry has been linked to mental health and particularly to anxiety, but the concept itself has typically remained poorly defined. Researchers such as Stallard (1993) and Weisz, et al., (1998) have asked questions such as "How concerned are you about....?" "How worried would you be if...." without further definition, expecting respondents to rely on their everyday understanding of the concept. Responses to the question have also been analysed without further clarification of the concept. According to Boehnke, Schwartz, Stromberg, and Sagiv (1998) this has had the predictable result that research findings in the area have been confusing. Boehnke et al. have therefore recently defined worries much more specifically stating that they are "cognitions that a state of an object in one or more domains of life will become or remain discrepant from its desired state" (p.778). They further noted that worries are experienced affectively as varying along a range in terms of how disturbing they are.

A problem with the measurement of worry is that it has been shown in different studies to be linked with both poor and with good mental health. Boehnke et al. (1998) argue that this has occurred because responses have been analysed in relation to domains of worry and argue that the object of the worry should also be considered. They consider that worrying about events which might affect the self or the ingroup, which they designate "micro" worries, is likely to be related to mental health in ways that are different from more global worries about the wider society or the universe, designated "macro" worries. In their research, they ask the usual undefined question about worry, but analyse data in relation the object of the worry. In these terms, worrying about one's child's development would come into the micro worries category and would be associated with poorer mental health outcomes.

Evidence that quite a lot of parents have concerns about their children's development comes from an American study by Riem and Adams (1980) who asked 583 mothers of children aged less than 5 years to respond to a checklist of 60 developmental-behavioural items. One category called "Problem Behaviours" listed such items as crying-whining, temper tantrums, aggressive-destructive behaviours, problems with separation, self-abusive behaviours and rocking. Thirteen percent of mothers indicated that they were moderately concerned about their child's crying-whining, while a further 9% saw this as a major concern. Temper tantrums were a moderate concern for 12% of parents and major concern for a further 9% while a total of 10% showed some level of concern about aggressive-destructive behaviours. Mothers were more likely to be concerned about boys' problem behaviours, with 50% of mothers indicating some concern about sons compared with 41% for girls.

A similar study was done more recently in England where Stallard (1993) gathered data about a very large sample of 3-year-old children (n = 1170). Stallard added a rating of parental concern to the Behaviour Checklist (N. Richman, 1977) which is routinely administered by Health Visitors in the United Kingdom. Besides indicating whether particular behaviours occurred parents were asked to say how concerned they were about them, with options of "not at all", "a little" or "a lot". Over 20% expressed some

degree of concern about child management, tantrums, or eating habits with 5% expressing a lot of concern about certain aspects of child development (e.g., child is overactive, has poor concentration, is difficult to control).

Cross-cultural investigations such as that of Weisz et al. (1988) yield further evidence that parents are likely to have concerns/worries about their children's development. Working with a sample of Thai and American parents of 9-year-old children and with teachers and psychologists in each country, Weisz et al. discovered that adults' concerns about behaviours differed along cultural lines, irrespective of whether acting out or withdrawing behaviours were considered. In this study vignettes describing children who showed under- and over-controlled behaviours were followed by a number of questions two of which asked how much the respondent would be worried if he/she was that child's parent or teacher. Thai adults (n = 228) were significantly less likely to worry, had they been that child's parent or teacher than American adults (n = 233) and were also significantly more likely to believe that the child's behaviour would improve. The authors suggest that one possible reason for the lower level of concern on the part of Thai adults is the high level of tolerance to broad variations in children's behaviour.

These three studies provide evidence for both parental worry about child development and for cultural variation in the extent to which parents do worry. Immigrant parents may be more likely to worry about their children's development than native-born parents since their children are enculturating to different behaviours in the community from those of the parents' home country. The evidence that acculturation consists of behavioural shifts but that core values remain constant for long periods (Rosenthal, Bell, et al., 1989) suggests that while parents make behavioural accommodation to the demands of children enculturating to the host society they may be very concerned about behaviour patterns which are different from their culture of origin. Such questions need to be addressed in a multicultural society but it has not been possible to find research addressing this question to date.

The likelihood that migrant parents have such concerns is increased by the widely recognised relationship between emotional competence (which is culturally defined) and social acceptability. In fact various authors (e.g., Manstead, 1991; Rogoff, Baker-

Sennett, Lacasa & Goldsmith, 1995) note that emotional and cognitive development and socialisation are so closely linked that it is difficult to study one without considering the other components. Studies in this area have related emotional behaviours to sociometric status and general likability among other dimensions. For example, Sroufe et al. (1984), in a detailed study of 15 pre-school children over a period of 10 weeks and a further 24 over 20 weeks, found that happy children were more popular than less happy peers, with popularity determined by teachers ratings and by sociometric techniques.

Similarly, Denham, McKinley, et al. (1990) took a number of measures of the social and emotional skills of 65 children who were around 3.5 years in age. Measures included sociometric status, assessment of children's skills in identifying emotion expression as shown facially, and evaluation of their knowledge of emotion-eliciting situations. Teacher ratings of children's prosocial, social and aggressive behaviours were collected and children were also observed in the classroom to determine the frequency of expression of sad, happy, angry, hurt and fearful affect. Even when age and gender effects were partialled out, it was apparent that the positive peer ratings were associated with observed happiness in the child being rated. In contrast, angry children, that is, those showing a range of hostile-aggressive behaviours, have been shown not to be liked by their peer group (Rubin & Clark, 1983).

Acculturation and Child Socialisation

Acculturation is a process which occurs over time and as such has been studied in people who have lived for anything up to 10 years in the host society. In the context of the present study, this is the period during which the mothers are also raising children.Mothers in the study can be expected to want their children to be socially accepted and happy and might respond to different social mores in the host country by changing some of their socialisation practices.

Studies of parenting practices in the context of immigration are few and have mainly focussed on the experience of Chinese migrants to Western countries. They show differences in parenting practices between immigrant and host society parents. In one study, by Lin and Fu (1990), comparisons were made between Taiwanese Chinese, immigrant Chinese in the USA, and Caucasian-American parents' child-rearing

practices. Mothers and fathers of 138 children aged 6 to 7 years each independently completed a 28 item questionnaire which measured parental control, encouragement of independence, expression of affection and emphasis on achievement. Significant differences were obtained on some of these dimensions (e.g., parental control, emphasis on achievement) suggesting that parenting practices differed between the Chinese and Caucasian-Americans. No differences were obtained for expression of affection, the only dimension with a clear affective component.

A second study, which also used questionnaires, is that of Kelley and Tseng (1992). These researchers looked at characteristics which parents think are important for their child to develop (e.g., politeness, originality) and dimensions of parenting (e.g., use of physical punishment, consistency). Respondents were 76 mothers of 3- to 8-year-old children, of whom half were immigrant Chinese and half Caucasian-American, a well-educated, middle-class sample. Although child-rearing goals did not differ between these two groups, mothers in the two groups said they used different parenting approaches to achieve these goals. Immigrant Chinese were significantly more likely to use harsh scolding, and physical punishment and held more restrictive attitudes (undefined) than host society Caucasian Americans. The latter group described themselves as more nurturing, more responsive to children's input, and more consistent than the immigrant mothers. Mothers from both ethnic groups placed significantly greater emphasis on emotional adjustment for older children (6- to 8-year-olds) compared with younger children (3- to 5-year-olds).

A limitation of these two studies is their reliance on questionnaire data. Indications from the study of temperament suggest that Chinese responses to questionnaires may not be confirmed by observational data. As noted elsewhere, observations of the temperament of Chinese infants show them to be fairly placid while information from questionnaires suggests parents find them temperamentally difficult (Freedman & Freedman, 1969; Hsu et al., 1981). Perhaps Chinese parents are self-critical to a degree not found in other cultures.

Differences in broader values may also influence parenting in the context of migration. In Australia, for example, Turkish parents (n = 444) have expressed a range of concerns

about the general ethical climate of the majority culture, about Australian child-rearing, and about the changes in Turkish child-rearing practices which occurred as a consequence of migration. In response to a questionnaire prepared by Minas, Klimides and Stuart (1993) 32% indicated they were not satisfied with the way children were raised in Australia and just over half viewed the general ethical and moral environment in the community unfavourably. About 55% acknowledged that Turkish parenting practices changed with migration but many perceived these unfavourably. Only 10% said they were completely satisfied with the way Turkish children are reared in Australia. It is possible that these views contribute to the isolation of Turkish people in this country. Minas et al. report that 48% of their sample never had social contact with non-Turks and a further 18% had only bi-weekly contact.

Differences between their parents' values and socialisation practices and those of the majority culture might lead to difficulties for the second generation, that is the children of migrants. Children who were themselves born overseas might also show more acting out and distressed behaviours than children in the host community. This could occur because of the conflicts that arise between these children and their parents. Some anecdotal reports and published articles offer support for this view. Akoodie (1984), for example, discussed the development of the self-concept in relation to immigrant status, arguing that it is more difficult for children from immigrant groups to achieve a strong positive self-concept in a host culture where some of their characteristics are derogated. Similarly, Koplow and Messinger (1990), reporting case material from four children in therapy, have shown how parents' poor adjustment to the host culture may have detrimental effects on their children's psychological development.

Recent studies in this area have been of adolescents and young adults from various ethnic groups. Many of these studies also include a comparison group of adolescents from families who remain in the country of origin, as well as a comparison group of young people born in the host country. Research by Chiu, Feldman and Rosenthal (1992) is typical of this kind of study. These investigators compared samples of Chinese and Caucasian high school students in the United States, Hong Kong and Australia. The Chinese adolescents were first or second generation settlers. Numbers in the various groups ranged from approximately 60 to 100, the only small group consisting of 32

second generation Chinese adolescents in Australia. Two measures of adolescent distress were taken. Results failed to support the notion that immigrant children would show significantly more general indicators of stress than either Caucasian Australians or Chinese young people living in Hong Kong. Within the migrant sample, however, first generation adolescents reported more symptoms of emotional distress (e.g., anxiety, depression) than the second generation whose members were more likely to report somatic symptoms (e.g., headache, fatigue). Chinese immigrants to the United States reported more emotional distress than the equivalent group in Australia. It is not clear whether this reflects a possibly greater willingness of the majority culture in the United States to discuss psychological discomfort.

Obviously the possibility of conflict between parents and adolescents is greater where parents hold country of origin values and children acquire host country values. This was investigated by D. A. Rosenthal, Demetriou, and Efklides in 1989 with a sample of Greek, Greek-Australian and Anglo-Australian adolescents. There were no significant differences between groups in amount of conflict, although mothers and adolescents acknowledged significantly more conflict than fathers did. Anglo-Australian adolescents were significantly less likely than either middle-class or working-class Greek adolescents to use discussion to resolve conflict and were less likely to reach compromise solutions. Greek-Australian adolescents also used discussion less than middle-class Greek adolescents.

Overall, the results of this study suggest that the Greek-Australian adolescents had moved towards mainstream Australian culture in the ways in which they dealt with family conflict. This did not appear to be causing too much stress for their mothers or fathers who were likely to use an authoritative approach to resolving conflict rather than the uncompromising approach of Anglo-Australian fathers and of professional Greeks resident in their home country. D. A. Rosenthal, Demetriou et al. (1989) concluded that the immigrant parents had also changed as a result of their acculturation to Australian culture, developing a Greek-Australian style of parenting. Immigrant parents such as these are unlikely to have children who find home life with acculturating parents excessively stressful.

Conclusion and Hypotheses

The brief outline of some aspects of culture and related child socialisation practices, and of the little cross-cultural research which has been done in this area, suggests that there may be some similarities between the three migrant groups of interest in the present study. The Turkish, Indian and Hong Kong Chinese parents seem likely to show a very high level of tolerance of their children's inappropriate behaviour during the first 4 to 6 years, but to then suddenly change their style and place much higher expectations on the child. Both of these groups, with their emphasis on the maintenance of group harmony, seem to require suppression of negative emotions especially. This demand may be more consistently applied among the Chinese where one major social ethical framework is being inculcated. Among Indians, the flexibility of the Hindu religion permits a greater variety of modes of being and behaviour which is expressly prohibited in one context may be seen as acceptable in others. Such variability might mean that behaviours associated with emotional experience would be less consistently moderated overall.

Among all three of the collectivist societies, Turkish, Indian and Chinese, the expectations of submissive acceptance on the part of girls may be more severe than that expected of boys and it is likely therefore that girls' expression of negative emotions is more tightly constrained than boys'. Indian and Chinese children grow up in a situation where moderation of expression is valued and may be expected to be less extreme in their expression of their emotions by the time they reach middle childhood. This may be more marked among the Chinese.

As noted at the conclusion to Chapter 1, Anglo-Australian children, whose socialisation is almost certainly similar to that of children in other Western countries, may be permitted to express the full range of their emotional experience and may be markedly more comfortable expressing anger to its full extent. But among boys especially there is likely to be some restriction on the extent to which sadness and anxiety are allowed expression and this restriction may be greater for boys than for girls who are socialised in an English language, Western culture to become the keepers of emotional behaviour. It is likely therefore that the patterns of expression among the migrant groups of children will be more similar to each other than they will to the Anglo-Australians.

Additionally, it is likely that as children enculturate towards the mainstream Australian culture their parents, acculturating less fully, will show higher levels of concern about expression of emotion on the part of their children than will Anglo-Australian parents.

The hypotheses which were tested in the present study are as listed below. It should be noted that all hypotheses are concerned with maternal perception of children, and do not measure the presence of behaviours per se. The hypotheses then are:

1. There will be differences between cultures in the frequency with which children show various behaviours when expressing each emotion. Thus, there may be both behaviour-specific differences in frequency of certain modes of expression and more global differences between ethnic groups in the total frequency of a number of behaviours indicative of emotion. For example, children in one ethnic group may express themselves verbally more than those from another group. Such variation is likely to occur as a result of different cultural emphases on what is acceptable and what is not.

2. Boys and girls will express happiness, sadness, anger and anxiety differently. Girls can be expected to show less anger and more sadness and anxiety than boys. Behaviours associated with happiness will differ in kind, but not in intensity. This will be true in all four ethnic groups.

3. Younger children will express their emotions differently from older children. Because younger children are still acquiring knowledge of social rules in relation to emotional expression they are likely to show a wider range of behaviours in each emotional state and may show such behaviours more frequently than older children. This can be expected to result in patterns of behaviour which are more similar among younger than among older children. This will be true across all ethnic groups.

Happiness, sadness, anger and anxiety are universally experienced and appear to consist largely of common components. Differences between ethnic groups, between boys and girls and between younger and older children are therefore likely to be subtle, and consist of variations in a preference for one mode of expression over another rather than in an absolute difference. For example, primary school aged children in one ethnic

group/culture might be more likely to express an emotion verbally while those from another might be more boisterous and express themselves through larger movements of the body. As suggested in Hypotheses 1 to 3, however, it is expected that cultural level preferences for one mode of expression of emotion over another are established early in children's development.

The remaining hypotheses are:

4. Mothers from Hong Kong, India and Turkey will report that their children show fewer behaviours associated with the negative emotions of sadness, happiness and anger than will mothers of Anglo-Australian descent. This is consistent with the value placed in the cultures of immigrant women on maintenance of harmony and on moderation in expression of emotion.

5. Migrant mothers will express more concern about their children's expression of emotion than Anglo-Australian mothers. This is consistent with a discrepancy between their own values and the behaviours which children are learning as they adopt some behaviours of the Anglo-Australian mainstream.

The lack of information about the emotional development of Anglo-Australian, Indian, Chinese and Turkish children which has been repeatedly noted in the present chapter means that it is not possible to formulate more detailed hypotheses. However, the repeated finding of gender- and age-related differences in monocultural studies of emotion, and the differences between ethnic groups along a range of dimensions which have been reported in the cross-cultural literature, suggest that the null hypothess should be avoided. The hypotheses, as presented, permit exploration of the relationship between culture and emotional expression, among an age band about which relatively little is known. Predictions about direction and size of differences are also not possible in this exploratory study, so hypotheses remain two-tailed.

CHAPTER 5: INTERVIEWS AND QUESTIONNAIRE PREPARATION

Cross-cultural studies in psychology require consideration of some special methodological issues without which results are likely to add little to current understanding. Some of these issues are relevant to the current study which involved interviews and questionnaire development and use of these tools with acculturating immigrants. The present chapter outlines such issues and discusses how they were dealt with before presenting the actual methodology used in developing the questionnaires.

DESIGN ISSUES IN CROSS-CULTURAL RESEARCH

Sampling

Selection of the sample is an important issue in cross-cultural research. Various authors (e.g., Berry et al, 1992; Lonner & Berry, 1986) have commented on the apparently unplanned selection of comparison groups from which samples are drawn. They note that in many studies the choice appears to be made solely on the basis of friendship with a possible co-investigator from the selected ethnic or cultural group. While this was understandable in early comparative work continuing cross-cultural research has now provided a more rational basis for selecting ethnic/cultural groups from which to draw a sample. Indeed, Lonner and Berry (1986) have argued that selection should only be made after a great deal of background research to establish whether including some specific ethnic/cultural group will be useful in testing the hypothesis.

One theoretical framework which has been used extensively in cross-cultural research as a basis for selecting countries from which to draw a sample is that of Geert Hofstede (1980) who, as outlined in Chapter 2, described four dimensions along which cultures varied, these being Individualism-Collectivism, Uncertainty Avoidance, Masculinity-Femininity and Power Distance. Hofstede's findings have been generally supported (e.g., Hui, Triandis & Yee, 1991; Kim et al, 1994; Triandis, 1995) in the large number of investigations that followed his 1980 publication.

In instances where other dimensions need to be considered these appear to be additional, not alternative, to those outlined by Hofstede. An example of this is the "Confucian work dynamism" dimension identified by the Chinese Culture Connection (1987). These researchers asked a number of Chinese social scientists to produce a list of at least 10 values which they considered to be fundamental for Chinese people. This generated a final list of 32 values. English language translations for these values were prepared and university students in 22 countries were asked to indicate how important each one of these was to them personally. Results were factor analysed yielding four factors, one of which was labelled "Confucian work dynamism". Values which loaded highly on this factor included, for example, thrift, persistence, and personal steadiness. Unlike the other three factors, this factor showed effectively no correlation with the dimensions of culture earlier identified by Hofstede and was, therefore, considered to be an additional value for Chinese people.

Some researchers have applied different labels to describe patterns of interaction and decision-making across cultures. However, P. B. Smith and Bond (1993) have argued that when the descriptions of their cultural difference dimensions are compared with those of Hofstede it becomes apparent that the same dimensions of social interaction are being investigated. Thus, there is considerable supporting evidence for the validity of the dimensions of social interaction as identified by Hofstede, making them useful as a basis for selecting ethnic groups to be compared.

One of the problems with these culture difference dimensions is that they are cultural level preferences, reflecting the broad values of members of the community. Individual members of any cultural group do not reliably respond in ways which are typical of their culture as a whole. Women, too, show different patterns of response on these dimensions to those of men across the cultural groups (Hofstede, 1980), a finding which may be of some importance in relation to the present study where all respondents were female.

Although specific research linking these preferred cultural level patterns of interaction and emotional expression is limited in relation to children's development, some authors have stated that a relationship between collectivism and expression of emotion does

exist. Cha (1994), for example, has noted a pattern of emotional suppression as a traditional behaviour among the collectivist Koreans and Yamaguchi (1994) has stated that "collectivists are expected to regulate the expression of their... emotions so that they will not make group members unhappy" (p.179). More specifically, Bronfenbrenner (1970), cited an earlier report on child-rearing in Russia which stated that "instances of aggressiveness... are genuinely rare" (p.77), a finding which his own subsequent study confirmed. He appears to attribute these results to the strongly collectivist emphasis in child-rearing at that time.

Why should this relationship exist? The answer lies in the studies of children in their developmental niche (Super & Harkness, 1986) Children's developing knowledge about emotional expression occurs within their cultural context. Parents do teach their children socially acceptable ways to express their emotions within their own culture and these ways are likely to relate to preferred patterns of interaction at a more global level in adulthood. Teaching about emotional expression by parents of different cultures is likely to result in variations in the frequency and intensity of expression of emotions. It was, therefore, considered appropriate to use Hofstede's (1980) data in the selection of ethnic groups for this study as is described later in the present chapter.

Socio-economic Status

Numerous authors (e.g., Kohn, 1969; Brislin, 1993) have noted that consideration of socio-economic status is also necessary in cross-cultural studies. There is well-established evidence for variation in many areas, including child-rearing, which relate to social class. An early and widely cited study of this issue is that of Kohn (1969) who identified clear differences in values between working-class and middle-class parents. Working class parents valued obedience in their 10-11 year-old children while middle class parents valued the development of self-control in their children in communities in both the U.S.A. and in Italy. Valuing obedience in children was shown to be associated with conformity to authority in adulthood, a characteristic which has been identified as also commonly occurring in more collectivist societies. Recently, Daab (1991, as cited in Triandis, 1995) has claimed that "in all societies the upper social classes are likely to be relatively more individualistic than the lower social classes."

Work by Burns, Homel and Goodnow (1984) appears to raise questions about the extent to which socio-economic status is a predictor for some values amongst immigrants to Australia. They reported finding the immigrant status alone was a better predictor of some values than fathers' education or occupation levels. Specifically, they claimed that their results showed a mixed pattern, with immigrants who were employed in low socio-economic status occupations having some traditional working class values, for example valuing good manners, neatness and cleanliness while at the same time having a future orientation for their children, as shown by their high valuing of the item "is a good student." Burns et al.'s interpretation of the findings is at odds with that of Kohn whose value items they used. Kohn also found that a positive response to the item "is a good student" occurred among his Italian working class sample, but noted that the phrase had been defined as meaning that the child conformed to school requirements. It did not therefore represent a future orientation. The results may, as Burns et al. suggest, represent a cultural variation in values in which working class migrants value conformity in school more than others in their new homeland. Other values of the immigrant group are, however, consistent with values espoused by low socio-economic status respondents in Kohn's study both in the USA and in Italy. Kohn's middle class parents were more likely to value self-control, dependability, happiness and curiosity in their children.

Education also contributes to socio-economic status. This is of some importance in the present study as the difficulty experienced by immigrants from non-English speaking backgrounds in finding employment of equivalent socioeconomic status to that which they held in their country of origin (Berry et al., 1992; Rice, 1999) means that the second major indicator of status, highest level of education attained, is possibly a better indicator of values than occupation.

Ethnic Groups Selected for the Present Study

The sampling issues discussed by various authors were taken into account when deciding from which ethnic groups the sample should be drawn. To begin with, information about Hofstede's (1980) rankings on the dimensions, Individualism-Collectivism, Uncertainty Avoidance, Power Distance and Masculinity-Femininity for each of the 40 countries in his study were collated from various tables in his text (pp.77,

122, 158, 189) and data considered in relation to patterns of migration for people from these countries to Australia in recent years. Those groups for whom census data were supplied by Bureau of Immigration, Multicultural and Population Research (BIMPR) (1995a, 1995b, 1995c) revealed large numbers of migrants in Melbourne in the state of Victoria, Australia were considered further. This excluded migrants from countries with low rates of migration (e.g., all South American countries) and from developed countries who had cultural patterns with Hofstede rankings similar to those of Australians.

Four ethnic groups, Anglo-Australians, Indians, Hong Kong Chinese and Turks, were selected on the basis firstly, that they represented fairly extreme positions on one or more of the dimensions identified by Hofstede (1980) as varying between cultural groups, secondly, they were present in Melbourne in large numbers and thirdly, they had arrived in these large numbers in the most recent five years for which BIMPR data (BIMPR 1995a, 1995b, 1995c) were available. (This last constraint meant that there would be large numbers from each ethnic group who had lived in Australia for less than 10 years at the time of data collection in 1996-97). Because only four ethnic groups were selected from which to draw the sample it was not possible to deal with all the combinations of culture level variables identified by Hofstede. As can be seen in Table 1, which was derived from the rankings for the 40 countries in Hofstede's research, the ethnic groups selected for the present study typically had quite extreme rankings on two of the four dimensions but received intermediate rankings on the other dimensions. The expectation was that the groups would range widely in cultural values, but the purpose of the study was not to systematically investigate Hofstede's dimensions.

Table 1

Dimensions of Culture by Country for the Sample, Rankings from Hofstede's Data

Cultural dimension	Ranking for country			
	Australia	India	Hong Kong	Turkey
Individualism	2nd	21st	31st	26th
Power distance	28th	4th	7th	8th
Uncertainty avoidance	26th	33rd	36th	10th
Masculinity	13th	19th	17th	25th

Relatively large communities of Indian, Hong Kong Chinese and Turkish migrants live in Victoria, as is shown by 1991 census figures published by the BIMPR. At the time of the 1991 census 19,533 people from India, 13,720 Hong Kong Chinese and 14,452 from Turkey lived in Victoria, and of these approximately 95% lived in Melbourne, a city of over three million people. These migrants also constituted 32%, 23.9% and 52% respectively of all immigrants from their country now resident in Australia (BIMPR, 1995a, 1995b, 1995c) with on-going immigration of people from these countries suggesting that a pool of recent migrants as possible participants for the study was likely to exist.

The Hong Kong Chinese and Turkish communities live in clearly identified areas in Melbourne, with the Chinese living in large numbers in a few suburbs in the north-east and east of Melbourne while Turkish families lived close together in the north-west. Anglo-Australian and Indian women in the sample lived in scattered areas across the eastern half of the city. This difference in residential locale has some implications for social class, with residents of the western suburbs in general more likely to be of working class status while those in eastern suburbs are more likely to be middle class in status.

Socioeconomic Issues. Data about the educational and occupational status of women in the groups selected were available from the BIMPR (BIMPR, 1995a, 1995b, 1995c). Hong Kong women and Indian women resident in Australia show similar educational and occupational profiles in terms of spread of qualifications and are also

similar to educated Australian women. Turkish women are less well educated overall. These national data suggested that there was a need to include a sub-sample within the Anglo-Australian ethnic group whose educational and socio-economic profiles were similar to those of the Turkish group and a small group of lower socio-economic status Anglo-Australians was also included in the study.

Duration of Residence. Immigrant women selected for the study were relative newcomers to the country having lived in Australia for 10 years or less. These mothers of young children had enculturated to one society which had inculcated beliefs and values about parenting and children's behaviours and were now raising children who were being simultaneously exposed to another culture with different values. The 10 year cut-off point was selected because both Turkish and Indian contacts in the community pointed out that for many young people from their ethnic groups the sequence of life events was to marry, migrate and then have a family. Thus, Indian and Turkish mothers who had been in Australia for less than 10 years would perhaps be unlikely to have children in the age band 5 to 9 years. For consistency the same cut-off was applied to all migrant groups.

Conclusion. Selection of a sample in a cross-cultural study which includes immigrants requires consideration of socio-economic issues and duration of residence in the host country. Where immigrant groups who differ along these dimensions have been selected for other reasons it may not be possible to control for such differences, but their presence may make interpretation of findings more complex.

Interviewing and Questionnaire Use

Authenticity

In an extensive discussion of surveying, including interviewing and questionnaire use, in cross-cultural contexts Pareek and Rao (1980) state that in cross-cultural research it is necessary to consider issues of authenticity of data, not just validity and reliability. They believe that authentic data are gathered when the researcher has "the capability to get unbiased and genuine responses" (p. 128) from respondents whose reactions to the interviewer and the interview situation may be influenced by social and cultural factors in ways which differ from those with which the interviewer is familiar. In studies of

respondents from more than two cultures other than the researcher's own, these responses may also differ from each other in ways which are difficult to determine. Thus, for example, courtesy norms may vary between cultural groups, as may willingness to express private opinions publicly. Perceptions of the interviewer and his or her institutional affiliation may also vary.

On the other hand, authenticity is likely to be enhanced when interviewers know enough about the respondents' culture to be aware of reticence norms and willingness to trust strangers. Similarly, the choice of how to present interview questions may enhance outcomes through determining the extent to which answers are likely to be authentic. Members of cultures where indirect response patterns are valued are, according to Pareek and Rao (1980), more likely to provide authentic answers when the interview is less structured.

Validity

Besides problems of authenticity there may be problems of validity. Validity is likely to be lower if questionnaires or checklists prepared for use with Western samples are used, even if these have been translated (L. V. Gordon & Kikuchi, 1966) since questions may have little relevance to respondent concerns. Beiser, Benfari, Colomb, and Ravel (1976) have pointed out that "measures should reflect the realities of respondents' lives and their cultures as closely at possible" (p.11) rather than relying on the use of Western concepts. Such a goal can only be achieved when information is gathered in a manner that permits authentic data to be obtained from all groups in the study.

Equivalence

Pareek and Rao (1980) claim that questionnaire development in cross-cultural research also requires consideration of some other issues. Conceptual, linguistic and functional equivalence all need to be considered. Measurement equivalence is a further issue with must be addressed. Hui and Triandis (1985) also discuss problems of equivalence, confirming Pareek and Rao's view that conceptual and functional equivalence are the most basic requirements of cross-cultural research. They further note a need for equivalence in construct operationalisation, in individual items and ultimately in the total scale.

While it is difficult to assess the extent to which some of these requirements have been met in studies to date experimental work has been undertaken to assess cultural variations in some areas. Functional equivalence may be achieved through careful preparation and translation of questionnaires. Brislin and some colleagues (Brislin, 1970, 1986; Brislin, Lonner & Thorndike, 1973) have outlined features of the language that should be used where information is to be gathered in two or more languages. Guidelines for writing material suitable for translation include short sentences with redundant information, active verb forms and avoidance of features specific to the first language, such as colloquialisms, vague adverbs and prepositions. These characteristics of text allow the translator to write material in the second language which has conceptual and functional equivalence to the original versions even where exact language equivalence does not exist. Brislin (1986) notes that questions which seek behavioural information are likely to elicit more useful responses than those written in more abstract language (e.g., "Does your child do chores when asked?" is better than "Does your child co-operate when you need help?").

Additionally, Brislin (1970, 1980, 1986) has outlined actual procedures for ensuring that a good quality translation is prepared. Two related features of the process are critical. The first of these is use of the technique of "Decentering" (Werner, & Campbell, 1970). Decentering is "a translation process in which the source and the target language version are equally important during the translation procedure" (Brislin, 1970, p.186). The goal is to ensure a natural sounding version of the item in both languages; this may require modification of the first language version of the item as part of the process. The second feature is the use of blind back-translation from the target language into the first language so that the two texts in the first language can be compared. This procedure will also help reveal where concept equivalence is problematic. Use of these procedures, or of some variants, should always be followed by pre-testing in the form of a pilot study.

The present study followed procedures outlined by Brislin (1970) as these procedures have become widely accepted as best practice. Although women in all three migrant groups were offered the opportunity to have material translated into their first language only Turkish women felt they needed to do so as, unlike Indian and Hong Kong Chinese women, they were unconfident in use of English. Translation was undertaken by

qualified translators at a local agency. Both translators were native speakers of Turkish, with tertiary education in translation. Procedures used by these translators are detailed in the section "Translation of Instruments" later in the present chapter.

Measurement Equivalence. Measurement equivalence has also been studied in cross-cultural contexts. Such equivalence may be influenced by an acquiescent response set or by the likelihood that extreme responses will be selected. Although in general psychology there appears to be little difference in responses when the respondent has a choice of between 3 and 9 options (Komorita & Graham, 1965; Matell, & Jacoby, 1972) in cross-cultural studies the use of a wider or narrower range of options may influence findings. In one study Hui and Triandis (1989) administered a 165 item questionnaire to a total of 59 Hispanic and 60 non-Hispanic Navy recruits, allowing some a 5-point scale and others a 10-point scale on which to indicate their preferences for certain kinds of supervision. Non-Hispanics used the end points of the scale significantly less than Hispanics, but only on the 5-point scale. When a 10 point scale was used, the percentage of respondents using each point of the scale was almost identical. Although Hui and Triandis' statistical analysis, in which they applied ANOVA to discontinuous data violates the assumptions of ANOVA, their graphs of results confirm those of Chun, Campbell, and Yoo (1974) with Koreans and Americans (another study with methodological weaknesses, in this case the application of a t-test to standard deviations) and of Bachman and O'Malley (1984) who found differences in willingness to use extreme responses among Black and white American adolescents. Test-retest measures show that extreme response style is stable and hence reliable, and that respondents show some consistency of response style across a range of tasks (D. L. Hamilton, 1968). Findings from cross-cultural research show that the tendency to use extreme response style may be influenced by respondent gender (Chun et al., 1974), occupation (Brengelmann, 1960) education levels and level of acculturation among migrants (Marin, Gamba, & Marin, 1992) or by minority status itself (Soueif, 1958).

As little is known about the prevalence of an extreme response set among the ethnic groups who formed the sample in the present study, the decision was taken to provide a larger, rather than smaller number of options in the Worry subscales of the Children's Emotions Questionnaire (CEQ) developed for use in the present study. A 9-point scale

was therefore included in this section of the CEQ, the only part of the scale which allowed respondents to make ipsative judgments. Chan's (1994) measure of Individualism-Collectivism, the Colindex, which was also used in the study permitted a fairly wide choice among 7 points.

Chun et al.'s (1974) study suggested that Asian respondents might be less likely to have an extreme response set than Anglo-Australians whose culture is more similar to that of the United States of America, but the extent to which this would be true of Indians who, although Asian, have quite a different culture to Hong Kong Chinese, was unclear. No expectations could be formed about possible Turkish response sets, given the very limited amount of information available about their culture.

Acquiescence and Social Desirability

The presence or absence of an acquiescence set, sometimes referred to as a yea-saying or nay-saying set, and of social desirability effects on survey data have also been investigated. Studies of particular relevance to the present study are those which have investigated the relationship of these response patterns to psychological distress and psychiatric symptomatology across different ethnic groups. As in the present study, these studies ask questions about behaviour which is likely to be perceived as socially undesirable. A large number of such studies have been undertaken (e.g., Dohrenwend & Dohrenwend, 1966; Phillips & Clancy, 1970, 1972; Gove & Geerken, 1977; Mirowsky & Ross, 1980; Ross & Mirowsky, 1984) with native born groups in various countries which have sometimes been compared with migrant populations. Two studies, those of Gove and Geerken, and Ross and Mirowsky, each included large samples (n = 2,248 and n = 463 respectively) and involved investigation of the relationship between types of response bias and mental health status and are particularly interesting.

Ross and Mirowsky (1984) looked at the relationship between reported levels of psychological distress among Mexicans living in Mexico, Mexican-Americans and Anglo-Americans. They included measures of both acquiescent and social desirability response sets and also asked about education and socio-economic status. Mexicans resident in Mexico, people of lower socio-economic status and older people showed a more acquiescent response set. Women were less likely to have this response set than

men. But the existence of an acquiescent response set had no effect, either directly or via socio-economic status, on patterns of response to questions about mental health. Similarly, differences between ethnic groups were found in the extent to which people responded according to social desirability concerns. But again, these ethnic differences did not explain differences in reporting of psychological distress. Irrespective of ethnicity, a social desirability response set reduced reporting of distress while controlling for social desirability increased the relationship between socio-economic status and psychological distress.

Ross and Mirowsky (1984) reached the same conclusion as Gove and Geerken (1977). Both pairs of researchers suggested that these response styles produce insufficient effects to explain differences in patterns of response of members of different ethnic groups, of different gender, education, income or marital status to questions about mental health. Ross and Mirowsky further postulated that the tendency to respond in terms of social desirability and acquiescent set were likely to be related to the extent to which respondents experienced powerlessness in their lives. This might be consistent with their finding that the immigrant Mexican Americans obtained higher social desirability scores than Mexicans living in their home country.

Apart from the study by Chun et al. (1974) mentioned above, only one study of response bias has been undertaken with an Asian ethnic group. It is worth mentioning because of the inclusion in the present study of the Hong Kong Chinese ethnic group. This study, by Abe and Zane (1990) looked at the psychological adjustment of Asian and white American university students (n = 136), of whom 46 were foreign born Asian Americans from a number of countries. They included a measure of social desirability in their set of questionnaires and discovered that foreign born Asian American students responded differently to other students, obtaining lower scores, a result which they explain in relation to the known Asian tendency to respond to questions in a self-effacing style. This result was obtained in spite of the fact that the foreign born students in this sample had come to America at about 9 years of age and had lived in the United States for 10 years on average. Once again, however, the presence of this response bias

was unrelated to outcomes on measures of adjustment. On the basis of these studies it seemed unlikely that either of these response biases would influence outcomes on the present study but no questionnaires were included to assess their impact.

Context

Finally, it has been shown that members of different cultures respond differently to the provision of information about context, both in terms of verbal responses to questions measuring self-perception and to measurement of actual behaviours. In Japan, for example, Argyle, Shimoda, and Little (1978) noted that context determined the extent to which shyness was experienced, with context explaining more of the variance between experience than did characteristics of the person. Similarly, Indians behave differently according to context (Roland, 1988) and Indians, Hong Kong Chinese, and Japanese all respond differently to questions such as "Who am I?" depending on whether or not context is provided (M. H. Bond & Tak-sing, 1983; Cousins, 1989; Shweder, & Bourne, 1982). As mentioned earlier, studies of emotion regulation, especially those investigating the differential use of display rules between cultures, also show differences in expression of emotion according to context. Such studies suggested that provision of context in the present study would be desirable, especially as the present sample included participants from both India and Hong Kong. Accordingly brief scenarios describing an emotion-eliciting situation were prepared for each emotion under consideration and used in both the trial and final versions of the Children's Emotions Questionnaire (CEQ) which was developed once interviews were completed. Full details of CEQ development are provided later in the present chapter.

Specific Issues in Questionnaire Use in the Present Study

In addition to the large number of general reasons why questionnaires developed for use with Western children were unsuitable for use in the present study there are other problems with published questionnaires and checklists designed to measure children's behaviour (e.g., Achenbach's (1991) Child Behaviour Checklist; Gresham & Elliott's (1990) Social Skills Questionnaire). Many of these assessment tools have a primarily clinical focus and their norms refer to the frequency with which the behaviours are observed in Western, typically American, children. While some checklists include items which refer to behaviours associated with various affect states they typically focus on

extremes of negative behaviour, rather than on the behaviours shown by normally developing children. Thus it is possible to find questionnaires which assess the extent to which a child is depressed or aggressive but not simply sad or angry. A few such checklists include positive items but these are usually considered from the social skills perspective, and this limits the choice of items for inclusion.

The present study, however, looked at patterns of development among a non-clinical population. Mothers who were discussing their children's affect-related behaviours were all volunteers who described the behaviours shown by their children when the child was sad, happy, angry or anxious. Thus, assessment tools designed for work with clinical populations were likely to be unsuitable. Additionally, since the women in the study were drawn from four ethnic groups, the use of assessment tools which were normed for Western children was likely to impose an artificial limitation on the possible findings, potentially excluding behaviours shown by children in some ethnic groups. Therefore it was necessary to develop a questionnaire which considered aspects of emotional expression of normal children from a number of ethnic groups allowing for a broader definition of "normal" than may be characteristic of Western culture.

Design Issues and the Present Study

The present study attempted to deal with all the cross-cultural design issues outlined above. As will be seen in the detailed outline of methodology, questionaries developed in the West were avoided and efforts were made to develop a questionnaire which was as culture-free as possible so that authentic, valid information would be obtained. This was done through providing an opportunity for members of each ethnic group to contribute to the development of the questionnaire on emotion-related behaviours, and inclusion items offered by members of only some of the ethnic groups. Context was provided through presentation of a short scenario at the beginning of the questionnaire on emotions and participants responded to behavioural statements. Procedures used during translation followed guidelines suggested Brislin in 1970 and 1980. Checks for extreme responses were also carried out.

By addressing cross-cultural research design issues in these ways many investigators have been able to obtain valid and reliable information (e.g., Beiser et al, 1976; Misra,

Kanungo, von Rosenstiel, & Stuhler, 1985; Mollica et al, 1992). Questionnaires have been used repeatedly and successfully in many instances and it was therefore concluded that it was appropriate to use interviews and questionnaires in the present study.

As has been stated earlier, the present study was designed to investigate whether mothers from four ethnic groups, Anglo-Australian, Indian, Hong Kong Chinese and Turkish, perceived their children as expressing emotion in different ways. A second aim was to determine whether there were differences in the extent to which mothers worried about their children's patterns of emotional expression. Thus, the major independent variable was ethnicity and other independent variables were the child's gender and age. Dependent variables were emotional expression and maternal worry/concern.

For the purposes of this study the term emotional expression was operationally defined as behaviour exhibited by the child which occurred within a few seconds of some identified eliciting event and which was interpreted by the observer (the mother) as revealing an affect state. Behaviours included aspects of facial expression, verbalisation and vocalisation, fine and gross motor behaviours, attention seeking and withdrawal. Thus, smiles, frowns, pouting of lower lip, lips held in a firm straight line or turned down, eyebrows raised or lowered, gaze direct or averted, head held straight or tilted forward and down, finger flicking or twisting, rubbing hands, twisting a strand of hair or part of clothing, toe tapping, kicking, jumping, running, skipping, cuddling, thumb sucking, shouting, screaming, grunting, sighing, moaning or swearing in response to a pleasant or unpleasant antecedent event are all examples of behaviours which might occur. Mothers were asked how their children expressed emotion, that is, mothers reports of behaviours were elicited.

The second variable, parental concern or worry, was defined as thinking about or evaluating the child's behaviour with negative affect but was not further described. This approach follows that used in previous studies (e.g., Stallard, 1993; Weisz, et al., 1988; Young and Bodie, 1984). As reported in Chapter 3, these researchers have asked questions such as "How concerned are you about....?" "How worried would you be if...." without further definition and have gained information which allowed them to discriminate between groups. In Boehnke et al.'s (1998) terms, also outlined in Chapter

3, the present study examined one object of worry, the respondent's child. The domain of worry, emotional expression, was also narrow so the features of other research which have led to a lack of clarity in findings were unlikely to influence the results.

Demographic differences between the Anglo-Australian, Indian, Chinese and Turkish mothers which might be expected to influence their responses were age, education and socio-economic status. The impact of these differences on patterns of response was evaluated during the course of the study.

THE PRESENT STUDY

Ethics approval to undertake the research was obtained from three ethics committees before recruitment of participants commenced. These were the Human Research Ethics Committee at Victoria University of Technology, the Standing Committee for Ethics in Research on Humans at Monash University, and the Department of School Education in the state of Victoria, Australia (See Appendices A1 - A3 for these approvals). Approval from these two latter committees was required because Monash University had awarded a research grant to the researcher, a staff member, and because it seemed likely that participants would be able to be recruited through children's primary schools.

Recruitment and data collection took place in two phases. During the first phase of the study a total sample of 21 mothers from the Anglo-Australian, Indian, Hong Kong Chinese and Turkish communities in Melbourne, Australia, were interviewed using a semi-structured interview schedule which asked how their children showed their emotions. A questionnaire about the behaviours shown by the children when they were happy, sad, angry or anxious was developed from their responses. This instrument and two others, used to obtain demographic data and information about individualism-collectivism, were then translated. Only a Turkish translation was needed as the Indian and Hong Kong Chinese women were confident in their use of English. This first phase of the study is reported in detail in the remainder of the present chapter.

In the second phase of the research a further 14 mothers responded to, and commented on a trial version of the written questionnaires and the various instruments were amended on the basis of their comments. Finally, the amended materials were

completed by a total of 124 women, with numbers of respondents from the different ethnic groups varying between 16 and 38. This second phase of the study is reported in Chapter 6: Using the Questionnaires.

Preliminary Information Gathering

The aim of the first phase of the study was to gather data about how Anglo-Australian, Indian, Hong Kong Chinese and Turkish mothers of children aged 5- to 8- years perceived their children's expression of the emotions of happiness, sadness, anger and anxiety. This was done using an interview format as is outlined below.

Participants

During Phase 1 of the study a total of 21 mothers were interviewed. This group included six Anglo-Australian women, five Indian women, six Chinese women and four Turkish women. An Anglo-Australian woman was defined as a person of English-speaking background who had been born in Australia and had lived in this country for more than half her life. All migrant women were identified as members of their specific ethnic group by other members of their ethnic community. Indian women had been born and raised in India by ethnically Indian parents, Chinese women had been raised in Hong Kong by ethnically Chinese parents and Turkish women had been born and raised in Turkey to ethnically Turkish parents. All migrants had lived in Australia for less than 10 years, and demographic data showed that their average length of residence in this country was just over 5 years.

The women were all volunteers from within their local communities in Melbourne, Australia. These women formed a well-educated group with many holding post-graduate qualifications, the exception being the Turkish women, three of whom had only primary school education. All women were mothers of children aged between 5 and 9 years. Approximately half of each ethnic group were mothers of girls. Details of the demographics for the sample are shown in Table 2.

Table 2

Demographic Data for Interview Participants

| | Ethnic group | | | |
	Anglo-A[a]	Indian	Chinese	Turkish
Mother				
Age (M) (SD)	39.7 (4.5)	35.4 (4.4)	41.0 (4.5)	28.0 (2.4)
Years in Australia[b] (M)		4.7 (2.5)	4.7 (2.5)	7.1 (2.7)
Modal level of education	University degree	Post-graduate	Post-graduate	Primary education
English use				
Conversations in previous month[b,c] (M)		20.8	17.3	No data
Level of comfort[b,d] (M)		26.0	24.7	13.3
Child				
Age (M) (SD)	7.0 (1.3)	5.9 (1.8)	6.7 (0.7)	6.3 (1.6)
Modal no. of siblings	2	1	1	1

a. Anglo-A = Anglo-Australian   b = Migrants only   c. Possible range = 4 - 24
d. Possible range = 6 - 30

In response to questions about identity (described fully in the section "Instruments" below) nine of the 15 immigrant women in this group identified themselves by country of origin, four gave a composite identity, for example "I am Chinese-Australian," and three responded "I am Australian" if asked about identity. All Turkish women identified themselves as Turkish and these women were also less likely to use English or feel comfortable when using it than Indian and Chinese women. Preferences for reading material were more mixed with Indian women preferring English. Chinese and Turkish women expressed either a preference for their own language or had a mixed preference, with some preferring English and some Chinese or Turkish.

As can be seen in Table 2 children from the four ethnic groups were similar in age and number of siblings. They typically lived in a nuclear family, with only one Indian woman having her husband's parents living with her family, and one Chinese woman having her brother-in-law as an additional family member.

The children's fathers were described by their wives as also being well-educated. Over half held post-graduate qualifications. More than 50% of these men held positions with middle level status, as assessed using Daniel's (1983) scales for occupations in Australia. In contrast, all four Turkish husbands were unemployed.

Instruments

The two documents used in Phase 1 of the study were the semi-structured interview guidelines for the investigator, and the demographic data form. The purpose of the semi-structured interview was to help mothers outline common situations which elicited happiness, sadness, anger or anxiety in their child and to describe what their child did when feeling these emotions. These four emotions had been chosen because, as is described in previous chapters, they are universally experienced, recognised and expressed by children from an early age. Questions were designed to facilitate behavioural descriptions of children's response to emotion-eliciting situations. These data were obtained with a view to developing a culturally non-biased measure of children's emotional expression.

The semi-structured interview guidelines (See Appendix B) listed questions which were chosen because both observation and research suggested that people express their emotions using a number of physical and social behaviours, including facial expressions, gross and fine motor behaviours, and approach towards and withdrawal from others. These questions were initially fairly general. For example the first question, following the mother's description of an event which made her child show that he/she was happy was followed by the question "In general, how do you know when (child's name) is happy?" Questions became more specific progressively (e.g., What does his/her face look like? What sort of sounds does he/she make? Does he/she try to hurt or damage anyone or anything when he/she is feeling this way?). The more specific

questions were asked only if the mother had not yet given this or similar information in response to general questions. Where appropriate the mother was helped to explore and clarify her descriptions, and to express them in more specific behavioural terminology.

The demographic data form consisted of 17 questions. Some minor differences existed between the version used with Anglo-Australians and that used with immigrant participants. In the version used in interviews with Anglo-Australians questions which were irrelevant (Questions 9, 11 to 14, and 16) stated "This question omitted for Anglo-Australians." (However, for pilot and final studies questions were simply renumbered, as can be seen in the final versions, in Appendices C1 and C2). An example of necessary differences between forms is Question 3, which asked immigrants to indicate how many years they had lived in Australia. Anglo-Australians were asked to indicate whether they had lived in this country less than half their life, most of their life, or all their life. Questions 10 and 17 were also worded to recognise the fact that Anglo-Australians had worked in this country for all or most of their life. These differences in the format recognised the different life experience of immigrant and Anglo-Australians in areas where such differences were likely to relate to the study questions.

Demographic data requested included information about maternal age, post code, highest level of education for both parents, occupations of both parents in their country of origin and in Australia, child's gender and age and other persons living at home. Some additional questions about identity and acculturation were also asked of Indian, Chinese and Turkish women. These questions were chosen on the basis of research which has examined the identity and acculturation of migrants in other countries. Studies such as that of Mavreas, Bebbington and Der (1989) and Young and Gardner (1990) have suggested that English language competence and degree of comfort with its use, together with personal ascription of nationality, give some indication of acculturation and more specifically of integration into the host community. For example, migrants from China who have fully acculturated to Australia will describe themselves as Australian, while less acculturated persons might say they were Chinese-Australian.

Responses to such questions might also provide some indication as to the extent to which migrants from collective cultures can be expected to retain collective values. Bierbrauer, Meyer, and Wolfradt (1994) have suggested that the extent to which a person from a collectively oriented culture endorses values consistent with collectivism may change in association with the process of acculturation. Responses to questions about identity could therefore be relevant when considering women's responses to the Colindex, a scale used later in the study to measure Individualism-Collectivism.

Four questions (Questions 11 to 14) addressed the issue of identity. The first was a question which asked how respondents replied if asked to describe themselves. For example, options for Indian women were as follows:

> I am Indian
>
> I am Indian-Australian
>
> I am Australian.

For Hong Kong Chinese women the option "I am Hong Kong Chinese" was also offered. This was later collapsed with "I am Chinese" for the purposes of analysis.

The next question asked about preferences for reading. Four options were available, reading in Hindi/Chinese/Turkish, reading in English, reading in either English or their first language, or reading in some other language. This was followed by two more questions one of which asked about the degree to which women felt comfortable using English when, for example, shopping or talking at a social function. Respondents were asked to indicate on a 5-point Likert type scale the extent to which they felt uncomfortable or comfortable speaking English in the six situations (e.g., when shopping, when doing business over the telephone, when talking to the doctor) with 1 = Very uncomfortable and 5 = Very comfortable. The other question asked about the frequency of conversations in English in six different contexts (e.g., talking to a neighbour, a health professional) in the last month. Possible response options were: None, 1-4 times, 5-8 times and 9 times or more.

<u>Procedure</u>

<u>Recruitment.</u> All women recruited for the study lived in the city of Melbourne, Australia. Participants in the first phase of this study were primarily recruited through community contacts. Actual details of recruitment varied by ethnic group as is detailed in the remainder of this section.

Attempts to recruit volunteer participants through newsletters sent out by the principals of two primary schools in the first phase of the study were largely unsuccessful. Only two respondents, one from each school, were obtained in this way. Thereafter, participants were recruited in the general community. Some initial recruitment was done by the researcher. Using a networking approach, each mother who was interviewed was also then asked if she could think of anyone among her friends who might be interested in participating. If the woman indicated that she did have a friend who might help, she was asked to discuss the project with that friend and obtain her permission for her name and phone number to be given to the investigator. The investigator subsequently telephoned the original participant again about a week later to gather the names of possible new recruits. Five recruits were obtained with this kind of follow-up. The remaining 14 recruits were obtained through the efforts of community contacts in each ethnic group.

Written information (See Appendix D1) was posted to all participants, except the Turks, whose lack of confidence using English and concern about contact outside their own ethnic community made even limited phone contact difficult. One week after postal contact, a phone call was made to Anglo-Australians, Hong Kong Chinese and Indian women to discover if they were still willing to participate and to arrange an appointment time for the interview. One potential participant, an Indian woman, declined to be involved in the study and another proved not to have a child of the required age. One person identified as Anglo-Australian pointed out that she was a second generation Australian from a non-English speaking background and was therefore not included in the sample.

Initial contact with Turkish women occurred through attendance at a Turkish Women's Association dinner where the study was outlined by a Turkish-Australian, well-known in the community because of her employment as a social worker at the local community health centre. Information about possible participants gathered at this meeting appeared to yield a large number of women for the sample. However, further consideration of the information revealed that several of the women had lived in Australia for longer than 10 years. Three other women who had offered to participate were subsequently not able to be contacted by phone or withdrew because of ill-health. Of the 17 who offered to help with the study on that occasion only one was finally interviewed. Further attempts by the social worker to recruit at an individual level resulted in three more Turkish women offering to help with the study. These women obtained oral information about the study, in Turkish, from the social worker. She also arranged the appointment time for the investigator and interpreter to meet the participants.

The Turkish participants were given the written information in Turkish before the interviews commenced, were given time to read it and questions were answered before the interview. Three women wanted verbal reiteration of the written information with more specific examples of the kinds of questions that they might be asked.

At the time of recruitment all participants received detailed written information about the study in the language of their choice. All Indian, Hong Kong Chinese and Turkish participants throughout Phase 1 of the study were advised that interpreters were available to ensure clarity of communication but only the Turkish women took up the opportunity to be interviewed in their first language. Hong Kong Chinese and Indian women preferred to speak English.

Since recent evidence suggested that many women prefer female interpreters (Pardy, 1995) a female interpreter was requested at the translation agency and was provided. It is desirable that interpreters should have some knowledge of the specific area on which the research is focusing (Brislin, 1970) and for this reason a preliminary interview was

held with the interpreter before the first discussion with a Turkish mother. This interpreter had tertiary qualifications in her field and had previously participated in health related interviews so was comfortable with her understanding of the research requirements after only a brief discussion.

Interview procedure. To commence the study, two practice interviews with Anglo-Australian women were undertaken to trial the use of a semi-structured interview format for obtaining information from women about how their child expressed the emotions of happiness, sadness, anger and anxiety. The interviewer, who was also the investigator, is an experienced child psychologist who had completed large numbers of interviews in which behavioural data were gathered. She experienced no difficulty using the interview format. Additional practice interviews were then held with one Chinese, one Indian and one Turkish woman, the latter being interviewed with the aid of an interpreter. No difficulties were experienced with these interviews.

Interviews were introduced with a brief review of the written information. Once any concerns had been dealt with, the questions from the semi-structured interview schedule were worked through. In the practice interview and two following interviews with Chinese women this procedure varied slightly when the emotions of sadness and anger were introduced. Some literature suggests that Chinese people are not good at discriminating between these two emotions (Borke, 1973; Meng, Yan & Meng, 1985, as cited in J. A. Russell & Yik, 1996), and this was discussed briefly. All three women claimed not to have difficulty separating the two emotions, one stating quite specifically "I know the difference between anger and sadness" and so this attempt to promote clarification was dropped from further interviews.

Interviews took between 40 and 60 minutes to complete and all were tape-recorded with the consent of the participant.

Once discussion of children's emotions was completed the participants were requested to provide some demographic data about themselves and their families after which they were thanked for their contribution to the study. All participants were also sent a "thank you" card about a week to 10 days later.

Interview Results

Emotion-related stories and descriptions of behaviour from audiotapes of all interviews were transcribed, listed by ethnic group of participant and interview number. (Transcripts of eight of these interviews, for one boy and one girl from each ethnic group are included in Appendix F). Stories were compared in order to discover a suitable story line for the scenarios which were to form the introductory material for the Children's Emotion Questionnaire. In addition, detailed analyses of behavioural and quasi-behavioural data were made, so that items could be selected for inclusion in the questionnaire.

Stories

Stories told by these women about events which made children feel various emotions varied widely. For happiness one mother told about her small son who had just recently learned to urinate standing up, while others told of successes at school or in sport, or situations in which the child received a gift or special treat of some kind. This latter type of story was the most common. A few mothers found it difficult to recall a recent episode when their child had been especially happy, reporting that their child was generally happy and proceeding to describe behaviours which they associated with this general state of well-being.

Sadness was reported as occurring in situations where children wanted to do something but were prevented from doing so, either because of lack of resources (e.g., no money to buy an ice-cream) parental prohibition (e.g., not allowed to go and play in the street), lack of skill (e.g., poor piano playing skills) or being let down in arrangements with peers. Loneliness (e.g., no-one to play with near home) and death of a pet were also mentioned. Some children were sad if their mother seemed sad or unwell. Again a few mothers were unable to generate stories about specific saddening events.

The fewest accounts of specific episodes were offered in the context of discussion about anger, with 8 of the 22 mothers failing to describe a recent anger-eliciting event. These mothers plunged immediately into describing angry behaviours on the part of their children, so vivid was their experience of the children's expression of anger. Other

mothers indicated that their children got angry when they could not get what they wanted (e.g., arrangements to play with a friend after school were altered; siblings would not share toys) or when adults behaved in ways that were perceived as unfair (e.g., when mother accuses child of doing something he/she has not done; mother makes promise and then finds she cannot keep it because of changed circumstances).

Anxiety occurred in situations where the child felt uncertain about doing new things (e.g., going to a friend's home to play for the first time; participating in school athletics for the first time) or when the situation was not under the child's control (e.g., child has been bullied at school; mother does not collect child from school at the usual time). Some women were unable to give examples of anxiety and instead gave examples of specific, immediate situations in which the child experienced fear. Children's fears of the dark were commonly mentioned (e.g., walking with parents to the corner video shop after dark; going to sleep without any lights left on; walking down the hall to the toilet in the dark). Some women mentioned that they tried to arrange family life so that their young children were not exposed to fear or anxiety inducing events.

Behavioural Descriptions of Children's Emotional Expression

All behavioural (e.g., kicks) and quasi-behavioural descriptors (e.g., droops around the house) offered by each woman were transcribed with a record also kept of each respondent's ethnic group. Where women offered the same descriptor as one which had previously been offered by another respondent this was noted, so that evidence for the frequency of occurrence of each behaviour across ethnic groups accumulated. Results for each emotion were listed separately as shown in Appendix G.

As can be seen in Table 3, overleaf, the mean number of responses varied across ethnic groups and across emotions. Turkish respondents consistently offered the lowest number of behavioural descriptors, while Chinese respondents were the most consistent across the emotions, happiness, sadness and anger.

All groups gave fewest behavioural descriptors for anxiety and the greatest number for anger. The range of responses was quite large for any one emotion, with the Anglo-Australian women giving from 6 to 24 responses to questions about expression of anger.

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Median scores were higher than or equal to means in all instances. Some mothers stated that their child was less likely to show some emotions, this occurred most frequently with anger and sadness. In these instances the child was likely to be described as one who frequently showed anger, and only infrequently sadness, or the reverse.

Table 3

Behavioural Descriptors by Emotion and Ethnic Group

Emotion	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Happiness				
Mean no. of descriptors	11.7	10.0	10.8	6.0
Range	10 - 13	5 - 13	5 - 15	5 - 9
Sadness				
Mean no. of descriptors	8.0	5.0	10.0	6.2
Range	4 - 13	3 - 9	4 - 15	1 - 13
Anger				
Mean no. of descriptors	15.0	9.8	10.3	9.2
Range	6 - 24	3 - 11	2 - 16	5 - 12
Anxiety				
Mean no. of descriptors	6.0	6.2	7.0	5.4
Range	1 - 13	2 - 10	4 - 10	4 - 7

a. Anglo-A = Anglo-Australian

Common indicators of emotion (e.g., smiling, stamping foot) were offered by several participants, reducing the number of new items mentioned for each emotion by each ethnic group. Thus, for example, although each Indian offered on average 10 behavioural descriptors for their children's expression of anger, the total number of different descriptors offered by these mothers was much smaller. In all a total of 23 different descriptors were offered by these mothers, representing an average of 4.6 different descriptors per mother. Mean numbers of different responses per emotion for each ethnic group are shown in Table 4.

Table 4

Mean Number of Different Behavioural Descriptors for Each Emotion and Ethnic Group

Emotion	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Happiness	8.0	4.6	5.7	5.0
Sadness	6.3	5.0	6.2	5.2
Anger	8.9	6.0	6.7	6.8
Anxiety	6.0	6.2	7.0	5.4

a. Anglo-A = Anglo-Australian

Responses by Emotion

Happiness. Eight behaviours indicative of happiness were identified by one-third of the 22 mothers, or more. The child was said to smile by 19 women, and to hug some member of the family, with 13 women reporting this behaviour. Jumping, kissing someone, dancing and skipping were each reported by 9 mothers while having shining eyes and singing were each reported by 8 mothers. Finally, 7 women reported that their child said "I'm so happy".

An increase in talking was noted by six respondents, while another few described their child's face as looking "bright" or said that the child might become involved in play fights or say "I love you". A number of behaviours were reported by only one respondent e.g., Speaks with "cute" or babyish tone, jumps on furniture.

There were some variations in the frequency with which descriptors were obtained from members of different ethnic groups. For example, of the six responses that the child "talks more," three were offered by Chinese mothers and the other three by Anglo-Australian mothers. The same pattern was obtained for "Talks more quickly". Anglo-Australian children were the only ones who were described as showing happiness by putting their arm around a peer as the walked along together, while four of the five Turkish respondents noted that when their child was happy they would say something

complimentary such as "You're the best Mum" to their mother. Indian mothers were more likely than other mothers to report that when their child was happy they wanted to be a leader in games and that they were also more willing to help others when happy.

In total, the 22 mothers generated 74 different behavioural descriptors consistent with expression of happiness in their children.

Sadness. Although there were 90 different descriptors for sadness, fewer of these were common than was the case for happiness. Among the more common responses were "Cries quietly" which was reported by 15 respondents, "Hugs or cuddles sibling or parent" (9 respondents), "Sits quietly" (8) and "Walks or moves slowly" (7). Six children were described as cuddling a soft toy or quilt when sad. Of the remaining descriptors 61 were offered only once and 13 twice.

Again the behaviours reported varied from one ethnic group to another. Of the eight children in the total group who were described as doing something to distract themselves when they were sad, five were Chinese, and none were Indian. Chinese children were most likely to be described as speaking softly or slowly when they were sad, while Turkish women were most likely to say that their children would call them names or speak rudely to them.

Anger. As might be expected, a cluster of descriptors were common for the expression of anger. Fourteen of the 22 mothers stated that their children shouted or raised their voice when angry, and there were 12 reports that children screamed, grunted or groaned. Ten said that their child slammed doors or banged things, 10 that their child cried loudly and 10 that their child hit or punched others. Seven reported that their child sometimes kicked others when angry. Six children were reported as showing each of the following responses: Saying "I'm really angry", saying "I hate you", clenching their fist or walking in a heavy footed manner.

Thirty-three other behavioural descriptors were provided two to five times, and 50 descriptors once only in the total of 95 behaviours which were described.

Behaviours listed by predominantly one or two ethnic groups included "Smashing or damaging things " which was a behaviour reported by Indian and Turkish mothers. "Arguing or talking back" was identified by one-third of the Chinese mothers, and half of the Anglo-Australian mothers, but not by any Indian or Turkish mothers. No Chinese children were reported as saying "I hate you" and no Turkish children stated explicitly that they were really angry.

Anxiety. Although a large number of descriptors was elicited there were only two relatively common descriptions of anxiety related behaviours. The first of these was that children asked repeatedly about the event they were anxious about. But this response was described by only one-third of the 22 mothers. The second response reported by seven mothers was that the anxious child "sits very close to mother or wants mother to be near". Other behaviours described with any frequency at all included "Clings to mother, wants to be held" (5), "Cries" (5), "Says "I don't want to... or I can't..." (4), "Says "I'm scared/frightened about..." (4) and "Cuddles soft toy or blanket" (4).

The last of these behaviours was entirely elicited from the Chinese mothers, half of whom also reported noting a sad, tense look about their child's face when he/she was anxious. The only other person to report this facial indicator of anxiety was one Indian woman. Other behaviours listed by mothers from one ethnic group only were avoidance of eye contact, inability to concentrate and unwillingness to talk about the anxiety inducing event. All of these patterns of behaviour were reported only by a few Anglo-Australians. Chinese children were often reported as saying "I'm frightened ...." but no other mothers reported this behaviour.

Of the 88 behavioural descriptors listed for anxiety, 64 were offered only once, with 21 of these being provided by Anglo-Australian women and 17 by Turkish women. Chinese mothers were more likely than other groups to report trying to avoid putting their child into situations where fear or anxiety might be experienced.

Development of the Children's Emotions Questionnaire (CEQ)

The purpose of the CEQ was to be able to compare, across the four ethnic groups, mothers' perceptions of their children's expression of the emotions of happiness, sadness, anger and anxiety. In order to achieve this, the questionnaire included behavioural descriptors offered by mothers during interviews. Mothers had provided very many descriptors so it was necessary to select from these to develop a questionnaire that was not excessively long but that incorporated both common and unique input from the four ethnic groups.

A second purpose was to compare the extent of concern/worry reported by mothers from the various ethnic groups. Designing the questionnaire to permit mothers to respond quickly both to behavioural items and to questions about concerns was also important.

Both the basis for selection of items and design of the questionnaire are outlined in the following section.

Selection of Responses for the Questionnaire

The large number of behaviours reported by mothers as indicative of each emotion was considered to discover where there was overlap between them. Some responses proved to be very similar to others, for example "Concentrates well" and "Doesn't answer mother because so involved in his/her game" were collapsed into one category. Other responses which described behaviours that were in the same domain and appeared to be of similar intensity were collapsed into one item. For example, "Skips" and "Dances" became one item "Skips or dances," as did "Pushes, pinches or smacks " while "Hits or punches" became a separate item.

Responses which described specific, possibly genetically determined behaviours, such as "dimple shows" or "eyes crinkle up" were eliminated as were most of those offered by only one mother in one ethnic group. But where one mother in each of two or more ethnic groups reported a behaviour it was retained.

One additional behaviour associated with emotion in adulthood was added, this being "Goes pale," for anxiety. This had been mentioned by one Indian mother in the trial interviews but was not mentioned by any in the Phase 1 sample itself. Similarly, intense but rare behaviours were also included. For example, one Turkish mother reported that her child sometimes pulled their own hair when angry and this intense, self-punitive behaviour was retained in the questionnaire.

In sum, the trial questionnaire included all behaviours which had been commonly identified by mothers across the four ethnic groups, although a few of these had sometimes been grouped together in one item. In addition, all behaviours identified by at least one mother in at least two ethnic groups, a few intense behaviours listed by only one mother, and one additional behaviour from the practice interviews were also included.

Because the number of behaviours described for each emotion in the original data varied between 74 and 95 the final number of items in each subscale of the questionnaire also varied. There were 31 behaviours listed for happiness, 27 for sadness, 42 for anger and 31 for anxiety. This represented 42%, 30%, 44% and 35% respectively of the original behavioural and quasi-behavioural descriptors reported by the mothers. The smaller number of items in the sadness category occurred because of the high frequency of responses offered only once, plus a higher degree of overlap between items as originally recorded than was the case for the other emotions. For example, sadness was reported as eliciting a number of statements from children which were similar in their import, either indirect expression of the sadness (I'm upset), or blaming others (You don't help me; You make me feel bad). A number of very similar reports also described the child's pattern of withdrawing physically or by not saying much when feeling sad.

The behaviours listed for each emotion covered a number of domains, including approach/avoidance, gross motor behaviours, facial and vocal cues to emotions, prosocial/antisocial and cognitive/other behaviours associated with emotional expression. All subscales included at least one item for each of these domains, but the number of items measuring each domain again varied from one emotion to another.

Format of the CEQ

The CEQ was designed so that it consisted of three parts for each emotion. Firstly, a scenario describing an emotion-eliciting event was presented. The scenario outlined an event of a type similar to those which interview mothers from all ethnic groups had said were common in the lives of their children. Thus, for happiness the scenario described a treat (the child's birthday dinner), for sadness a plan for an enjoyable event failed to come to fruition (a friend cannot come to play), for anger there was injustice and frustration (one child takes another's toy and refuses to return it), while for anxiety the situation in which the child might find him/herself was unpleasant (the child is facing the possibility of having to do school work in a group in which other members have been unkind in the past). The final part of each scenario stated quite specifically that the child experienced a particular emotion in that context and was followed by the question "What does he/she do that helps you to know that he/she is...?". Each scenario was followed by a list of behaviours which had been described by mothers during interviews as occurring in the context of that emotion.

The scenario for sadness, for example, read as follows:

> Your child has asked if a friend can come and play and you have agreed. But when you invite the friend to come he/she cannot because he/she has already arranged to do something else. Your child is sad that his/her friend cannot come. What does he/she do that helps you to know that he/she is sad?

Instructions following the scenario were:

> Think about the behaviours your child would show in the situation described in the story or in a similar situation. Behaviours that your child might show when he/she is sad are listed on the next two pages.

Respondents were asked a) to indicate how often their child showed each behaviour and b) the extent to which they were concerned about it. This was be done by incorporating Likert-type rating scales into the questionnaire. Frequency options were: Never, once or

twice a month, once or twice a week, once a day, more than once a day. Participants responded to the statement "How much I worry about this behaviour" by selecting the appropriate number on a scale of 1 (= Never) to 9 (= Almost always). A sample of the design of the questionnaire can be seen in Table 5.

Table 5

Sample Layout of Items and Response Options for CEQ Sadness Subscale

BEHAVIOUR SHOWN WHEN CHILD IS SAD	HOW OFTEN I SEE THIS BEHAVIOUR					HOW MUCH I WORRY ABOUT THIS BEHAVIOUR *Circle an option between* 1 = NEVER *and* 9 = ALMOST ALWAYS
	Never	Once or twice a month	Once or twice a week	Once a day	More than once a day	
1. Lies on bed, head and body completely covered.						1 2 3 4 5 6 7 8 9
2. Cries loudly, shouts or screams						1 2 3 4 5 6 7 8 9
3. Giggles briefly						1 2 3 4 5 6 7 8 9
4. Face "falls" or looks serious						1 2 3 4 5 6 7 8 9

For the purposes of subsequent analysis mothers' responses to items about the frequency of occurrence of behaviours were designated Happiness, Sadness, Anger and Anxiety and as a group are referred to as Behaviour subscales. Responses indicative of concern about the behaviours were designated Happiness Worry, Sadness Worry, Anger Worry and Anxiety Worry respectively and as Worry subscales when referred to as a group.

The instructions for Happiness differed slightly from those for the three negative emotions. Instead of simply asking participants to indicate how much they worried about behaviours the instructions acknowledged that parents the probability of a different response to seeing this emotion expressed by their child but noted that it was possible they would be upset or concerned about some behaviours. Thus, these instructions read as follows:

> You are probably pleased when you see many of these happy behaviours. But it is possible that some of them upset or worry you.

Because the scenarios were presented in varying order, to eliminate order effects, this particular instruction was highlighted with red star at the beginning.

Translation of Instruments

<u>Translation of the CEQ</u>

The CEQ was not translated into Chinese or Hindi because women from both these groups, some of whom had earlier been sent information about the study in their first language, had expressed a preference for receiving written information in English. In discussion, various women from these two ethnic groups stated that this preference for English language written material was widespread among their ethnic group in Australia.

Translation of the CEQ into Turkish was undertaken by qualified translators at a local agency following the procedures outlined by Brislin (1970) which have been discussed earlier. Both translators were native speakers of Turkish, with tertiary education in translation. The requirements outlined by Brislin were discussed and one translator

prepared all materials. These were then back-translated into English by the second translator who had no knowledge of the original English version. A meeting of the two translators and the researcher was then held and discrepancies between the original English version and the back-translated version were discussed. Where the translators were unable to reach agreement the original English version was reconsidered and alternatives in English, which kept the same meaning were discussed. This method, known as decentering (Brislin, 1970), allowed the translators to reach agreement and resulted in changes to the English version which are described for each emotion.

Happiness. No problems were experienced with translation of the instructions or the scenario which accompanied this part of the CEQ. For Happiness, Item 1, originally read "Concentrates well" but required some additional information to become meaningful in Turkish and became "Concentrates well on the task he/she is doing". The English version became functionally equivalent with the addition of a couple of words, finally reading "Concentrates well on activity"

Item 15 which said "Plays independently" became "Plays well without close parental supervision". Item 28, "Wants others to share in pleasure e.g., join in activity" had the word "activity' changed to "game". Similarly, Item 30 "Becomes involved in imaginary games" was simplified to read "Plays imaginary games". These changes to the English version of the CEQ meant that an exact translation into Turkish was possible.

Sadness. Again there were no difficulties with the scenario but one item required alteration. This was Item 14, which originally read "Pulls away from hugs or other contact" and became "Pulls away from hugs or other touch" in English and Turkish. Item 16 "Says 'You make me feel bad' or similar" was discussed but remained as it was. The difficulty with this item was that, according to the translators, a statement such as "You make me feel bad" would be unlikely to be made by a Turkish child as it is of a higher register, or level of conceptual difficulty than would be used by a child. The item was included because the phrase "or similar" allowed parents to acknowledge some statement from their child which might carry a similar implication to that which was given.

Anger. The scenario for anger was changed very slightly during the process of translation and decentering. In English the story originally stated that "Your child tries repeatedly to get the toy back but he/she cannot get it". The latter part of this sentence was changed to read "but has no luck" in the English version as this permitted an exact translation.

Of the items, the first one, originally written as "Walks very briskly" was changed to read "Walks more quickly than usual". Item 10 "Speaks in a high-pitched voice" became "Voice gets higher" and Item 11 "Mouth forms a firm, hard line" became "Closes lips tightly". Item 29 "Bangs things or slams doors" proved very difficult to translate and was reduced to "Slams doors". These changes to original English version of the items meant that the Turkish translation expressed exactly the same idea. All other items remained unchanged.

Anxiety. The most important difficulty in translation of the CEQ was the difficulty with word "Anxiety" which became "Worry" in the back-translation. This problem was unable to be resolved as the translators stated that the Turkish language does not make a discrimination between anxiety and worry. Since the scenario, which described an impending class test, was available to clarify the particular meaning of the Turkish word, the word "Anxious" was kept for the English version and the Turkish word remained unchanged.

Of the items, Item 8 "Is agitated or restless" was shortened to state only "Is restless". This was because of difficulties finding a Turkish word which was equivalent to "agitated" but also sufficiently different from "restless" to be meaningful. Similarly, Item 12 "Muscles tight or tense" was shortened to "Muscles tense" and Item 16 "Mouth forms a thin line" became "Closes lips tightly" to ensure equivalence of meaning and form in the two languages.

Thus, of the total of 131 items which made up the total scale only 13 caused even minor difficulties in translation, and only one of the four scenarios finally contained a possibly contaminating difference between English and Turkish, the discrepancy between "anxiety" and "worry".

<u>Translation of Other Scales Used in the Study</u>

Besides the CEQ two other scales were also used in later phases of the study. These were the Demographic Data Form which had been used during interviews, and the Colindex which had not been used previously. These two scales were prepared for later use at the same time as the CEQ and also had to be translated. They are described in this section, along with an outline of problems associated with the process of translation.

<u>Demographic data form.</u> No problems were experienced with translation of the Demographic Data Form, which was unchanged from that used during interviews. The translator did point out, however, that the section on secondary schooling was inconsistent with the Turkish education system. In the English language version the section "About my education" asked respondents to tick the box showing the highest level of education attained and for secondary education the options were "Some secondary schooling" and "Completed secondary schooling" (See Appendix C2, question 8).

In Turkey, pupils may opt for completion after some time in junior secondary school (often followed by trade training), or completion of a more academically oriented program at a high school. In order for the question to be clear, the Turkish version of the options for post-primary schooling needed to recognise these two different ways of achieving completion at the secondary level. The question was rewritten for Turkish respondents, with options as follows:

I went to junior secondary school but did not complete

I completed junior secondary school

I went to high school but did not complete

I completed high school.

This version was used for both mothers' education and that of their husbands.

<u>Colindex.</u> The Colindex Scale (Chan, 1994) was developed to provide a short general measure of the extent to which a respondent has an individualist or collectivist orientation. It consists of 16 statements such as " What I look for in a job is a friendly group of co-workers" and "I tend to do my own things (sic) and most people in my

family do the same". The respondent indicates the extent of agreement with each statement using a seven-point numerical scale. Agreement with eight of the statements shows a collectivist attitude while agreeing with the remaining eight would reveal an individualist attitude. Statements are presented in a mixed order.

Chan's (1994) aim in developing this scale was to provide a single measure that incorporated the strongest discriminators from three other tools used to assess individualism-collectivism. Although the scale is too recent to have been widely used, it has been shown to discriminate between Hong Kong Chinese and American male university students as expected from other knowledge of the values of these two groups.

In the present study the Colindex was used as a check on the rationale for choice of groups. This was important because the sample had been selected on the basis of differences in Hofstede's (1980) culture level values. The Colindex permitted assessment of only Individualism-Collectivism. Similar tests have been criticised by Bierbrauer, Meyer and Wolfradt (1994) on the basis that they contain a mix of normative and evaluative items and this problem may also not have been dealt with adequately in the Colindex. Screening for other cultural values was not possible as unfortunately screening tests for them have not yet been developed.

This scale proved to be the most demanding in terms of difficulty of translation. Seven of the 16 items required careful consideration. A common difficulty was that the English back-translation from Turkish carried more compulsion than the original. Thus, Items 9, 12 and 15 which had the word "should" in the original had this word back-translated as "must". For example, item 9 originally read "Ageing parents should live at home with their children" became "Elderly parents must live at home with their children" in back-translation. After some discussion the final version of this item read "It is desirable that ageing parents live at home with their children" in both English and Turkish.

Three other items which related to membership of groups were also difficult to translate and the English version was changed to enable the English and Turkish forms to become more similar. These items, numbers 5, 7, and 13 were also discussed at length

and the original English wording was changed to establish equivalence of form across the two languages. Thus, item 5, which originally read "One of the pleasures of life is to be related interdependently with others" became "One of the pleasures of life is to have close personal relationships with others". Similar changes were made to the remaining two items which referred to the importance of belonging to groups.

The remaining item for which the English was also changed was item 6, which originally stated "What happens to me is my own doing" and which became "I am responsible for what happens to me" in the final English and Turkish versions. (See Appendix 12 for the final version of the full scale).

The difficulties with this questionnaire possibly arise out of its Chinese origins. Concepts expressed may be more comfortably expressed in Chinese than in English or Turkish. It seemed likely that the scale as presented in this study would less satisfactorily discriminate between individualist and collectivist orientations than was desirable but it was retained as a screening tool since other scales for measuring the individualism-collectivism dimension also have weaknesses of various kinds (e.g., Bierbrauer, Meyer & Wolfradt, 1994) and are typically considerably longer.

Summary

Preliminary data gathering through interviews with mothers provided a justification for using English when working with Indian and Chinese mothers, and Turkish with the Turkish mothers. It enabled the researcher to develop the CEQ which would be used to measure mothers' perceptions of their children's expression of emotion and their concern about it. Finally, in this early part of the study both the CEQ and all other materials were able to be translated into Turkish ready for use in Phase 2 of the research. This second phase of the study, which involved the administration of the survey of children's expression of emotion to mothers in the four ethnic groups, is reported in the following chapter.

CHAPTER 6: USING THE QUESTIONNAIRES

Phase 2 of the study consisted of two parts. Initially the questionnaires developed during Phase 1 were trialed as described in the section of the present chapter entitled "Pilot study" and amendments were made as required for clarity. Subsequently the amended questionnaires were completed by a large sample as is also reported later in the present chapter in a section entitled "Final study".

PILOT STUDY

The aim of this phase of the study was to discover sources of confusion in the written material which was to be sent to a larger group of participants in the final phase. A secondary aim to was discover how long it took participants to complete the questionnaires.

Participants

Participants in the pilot study were 17 women of whom four were Anglo-Australian, four Indian, three Hong Kong Chinese and six Turkish. Data from three Turkish participants had to be deleted from the sample, in one instance because the woman had lived in Australia for 28 years and in the other two instances because it seemed from the notes on the demographic data form that the husband had probably completed the questionnaires. This left a Turkish sample of three respondents while the numbers in the other ethnic groups remained unchanged.

Demographic characteristics of the pilot sample, shown in Table 6, reveal that mothers were typically in their mid-30's. Immigrant women had lived in Australia from approximately 3.5 to 10 years, with Chinese women the most recent arrivals and Turkish women having lived in this country for a considerably longer period on average. Most of the women lived in a nuclear family situation with only two Turkish women having additional adult family members (one brother and one uncle) resident in the family home. Only one Anglo-Australian had spent any time living overseas, but this person had still lived most of her life in Australia.

Table 6

Characteristics of the Pilot Study Sample

Characteristic	Ethnic group				
	Anglo-A[a]	Indian	Chinese	Turkish	Total sample
Mother					
Age (M)	38.8	35.0	36.0	35.7	36.4
(SD)	(4.0)	(1.4)	(5.6)	(3.4)	(3.5)
Years in Australia[b] (M)		6.8	3.7	10.7	7.0
(SD)		(3.0)	(1.5)	(3.1)	(3.7)
Child					
Age (M)	7.2	7.4	7.3	5.3	6.8
(SD)	(1.4)	(1.3)	(2.3)	(0.3)	(1.5)

a. Anglo-A = Anglo-Australian   b. = Migrants only

All of the immigrant women except for one Chinese woman, continued to identify themselves by country of origin, responding "I am Indian/Chinese/Turkish" if asked about identity. The one Chinese woman who responded differently described herself as Australian. Indian women spoke English more frequently, and experienced a greater level of comfort using it than Chinese or Turkish women.

Educational levels of women were generally high with 50.0% holding a bachelors degree or post-graduate qualification. Their husbands/partners were similarly well educated with 64.3% holding degrees and/or post-graduate qualifications. However, some Turkish women had only completed primary school. Socio-economic status reflected educational levels with more than 70% in middle to high prestige occupations. The children whose expression of emotion was under consideration averaged about 7 years of age, (see Table 6 for details) and six of them were boys.

Instruments

All instruments used during piloting of the questionnaires were presented in English and in Turkish.

The survey questionnaire used in the pilot study consisted of three parts as follows:

(a) Children's Emotions Questionnaire

This measure consists of two parts and is designed to assess both mothers' perceptions of how their children express their emotions and the extent to which mothers worry about these emotion-related behaviours. It comprises four sub-sections assessing perceptions of happiness, sadness, anger and anxiety. The number of items in each subsection varied. There were 31 items describing behaviours associated with each of happiness and sadness, 42 items for anger and 27 for anxiety.

Behaviours listed within each subsection varied widely. For example, the subsection Happiness included items such as "Giggles or laughs", "Stands up tall or straight" and "Plays imaginary games". Items from the Sadness subsection included "Pulls away from hugs or other touch", "Sits, doing nothing", and "Sighs repeatedly". Some items measuring Anger were "Calls others rude names", "Kicks" and "Clenches teeth" while examples of items from the Anxiety subsection were "Is restless", "Asks someone to help cope with the situation" and "Does something to distract himself/herself".

The frequency of each behaviour is rated as Never, Once or twice a month, Once or twice a week, Once a day or More than once a day. Extent of maternal worry about each behaviour is rated on a Likert scale ranging from 1 = Never, to 9 = Almost always. All items are presented in a positive (non-reversed) direction.

For data analysis, items can be considered individually or as four behaviour scales and four worry scales, as follows:

(i) Happiness. A Happiness scale can be formed by summing the ratings of the 31 items. The maximum possible score is 124 and the minimum is 0. The alpha reliability coefficient for this scale was measured at .85 in the pilot study.

(ii) <u>Sadness.</u> A Sadness scale, formed by summing the 27 Sadness items, permits a has a possible maximum score of 108 and minimum of 0. This scale also had an alpha reliability of .85 in the pilot study.

(iii) <u>Anger.</u> The 42 anger items form an Anger scale with a maximum of 168, again with a minimum of 0. In the pilot study this scale had an alpha reliability of .86.

(iv) <u>Anxiety.</u> An Anxiety scale can be formed by summing the 31 items, yielding a maximum score of 124 and minimum of 0. The alpha reliability of this scale was .86 in the pilot study.

Each worry scale, formed by summing items, had the same number of items as the behaviour scale for the same emotion. Maximum and minimum possible scores, and alpha reliabilities were as follows:

(i) <u>Happiness Worry.</u> The maximum possible score for the Happiness Worry scale was 279 and the minimum was 31. The alpha reliability for Happiness Worry was .98 in the pilot study.

(ii) <u>Sadness Worry.</u> The maximum possible score for this scale was 243 and minimum was 27. The alpha reliability of this scale was .95 for this scale in the pilot study.

(iii) <u>Anger Worry.</u> Maximum and minimum possible scores for the Anger Worry Scale were 378 and 42 respectively, and the alpha reliability of the scale in the pilot study was .89.

(iv) <u>Anxiety Worry.</u> This scale had maximum and minimum scores of 279 and 31 and an alpha reliability of .86 in the pilot study.

(b)   <u>Colindex</u>

The Colindex (Chan, 1994) is designed to measure Individualism-Collectivism. It consists of 16 items all of which presented in positive (non-reversed) direction. These items are presented in mixed order. Extent of individualism-collectivism is rated on a Likert scale where 1 = Strongly disagree and 7 = Strongly agree. Agreement with odd numbered items is indicative of a collectivist orientation, and agreement with even numbered items indicates an individualistic orientation. Since Individualism-Collectivism is a bipolar dimension the odd and even numbered items need to be considered as separate subscales, with the result that the highest score possible for

Collectivism is 56 and lowest is 8. The same range applies to the Individualism items. The alpha reliability for items measuring Collectivism was .73 while for Individualism it was .28 for the pilot study. An Individualism score which was as low as that obtained in the pilot survey would be too low for the scale to be useful if obtained in the final study.

(c)   Demographic Information

A number of single item measures on the Demographic data form assess the family and educational characteristics and socioeconomic status of the mother and her husband/partner.

Two items, frequency of use of English and degree of comfort using English, each measure language facility in 6 different situations. As outlined in Chapter 3, frequency of English use in the last month is rated 0 times, 1-4 times, 5 - 9 times, More than 9 times. When coded, these items yield a possible maximum score of 24 (More than 9 times for each of 6 situations) and minimum of 6 (0 times for each of 6 situations). The alpha reliability of this small scale was measured as .69 in the pilot study.

Comfort using English was rated 1 = Very uncomfortable to 5 = Very comfortable, yielding a maximum possible score of 30 and minimum of 5. The alpha reliability of this scale was .92 in the pilot study.

Procedure

Participants in this phase of the study were recruited on the same basis as those interviewed during the earlier phase of the study. One or two of those participants interviewed in some ethnic groups had indicated that they would be willing to give names of friends and contacts for the later phase of the study, this was the case with Indians, Hong Kong Chinese and Anglo-Australians. Further contacts were made through community and church groups. The pastor at the local Chinese Evangelical Church and one of the staff at the Turkish Women's Association were especially helpful, but still numbers remained small. Further approval from the Department of Education was then sought, to recruit through primary schools which were known to have high populations of Chinese and Turkish children and Turkish teacher aides at two

schools were able to recruit participants for the study. Indian women were more difficult to access in sufficient numbers as Indians settle across a wider geographical area within the community when they migrate (Wood, 1980), but these women were finally recruited through a community contact.

Women who agreed to participate were sent written information about the study (See Appendix D2) and asked to sign the consent form (See Appendix E). They were asked to complete the questionnaires and comment on them. This was done to further ensure that the English and Turkish language versions of the questionnaire were equivalent, readable and easily understood. It is a standard procedure in cross-cultural studies where materials have been translated (Brislin, 1970), but was also especially important for the Hong Kong Chinese and the Indian groups who had chosen to work in a second or other language.

Respondents in this phase of the study were asked to note any problems or confusion caused by poorly written items. Attached to the end of each questionnaire was an additional page with a request for respondents to comment on clarity of instructions, to identify any questions which they found distressing and to make any general comments. Respondents were also asked to indicate approximately how long it had taken them to complete each of the scales and the demographic data questions. Comments made by this group of women were used as a basis for amendments to the questionnaires before the final data were collected.

Amendments Suggested and Action Taken

Although respondents had been asked to comment on a number of aspects of the questionnaire comments were few, and the great majority of comments were simple phrases indicating that the respondent experienced no difficulty with any of the set of material, nor were they distressed by any aspect of it. Of the 14 respondents whose data were retained, eight (57.14%) reported no difficulties with any of the three sets of questionnaires, the CEQ, Colindex and the Demographic Data form. Other women made comments on one or other of the set of questionnaires, for example one Indian woman noted that Question 14 on Demographics was difficult but made no other comment, while one Chinese woman made the only comment offered by this ethnic

group about Question 16 on the Colindex, indicating some confusion about the possibility of anonymity when living in a city. There was no pattern of difficulty with particular items.

Some respondents expressed opinions rather than made suggestions. One Anglo-Australian mother commented that she had found the exercise "fairly daunting" while another stated that it was "not really applicable to my son". Two women commented that the type of behaviour shown by their child varied with the situation, while another noted that the child's response was an outcome of the interaction of the personalities of the protagonists. Several respondents made more positive comments, such one who said that the survey was well prepared, and two others who expressed thanks for being given the opportunity to participate.

The CEQ elicited the most suggestions for change with more than one person noting an error on the Happiness subscale where one page was inadvertently headed "Sadness". The need for consistent use of labels to the columns at the top of each page was also noted as a way of reducing possible confusion. Two spelling errors were also noted by one respondent. All these corrections were made to the final version of this questionnaire.

One Indian woman responded that some behaviours were not shown by her child but that she would worry about them if they did occur. This important point resulted in a change being made to the instruction in Column 3 of the scale. Where the trial version had said "How much I worry about this behaviour" the final version stated " How much I worry about this behaviour or would worry about it if I saw it". Instructions at the beginning of each subscale were also amended accordingly in the final version of the CEQ.

One respondent noted that the sequence in which the material was presented meant that after answering questions about her child, the participant was then asked, without introduction, to consider some of her own values and respond to the Colindex. There was a need for some introductory material to be included. The amendment to the final

version was made at the form on which the Colindex was presented. The statement "Now I would like you to change your focus, and answer some questions about your own values" was included at the top of the page before the title of the scale.

Some comments made only by one person, and not part of a pattern of concern were not amended. For example, one Anglo-Australian woman, who commented extensively, wanted a midpoint to be identified in the 9-point number sequence for intensity of worry on the CEQ. This is just one of the ways that researchers have dealt with Likert-type scales but is not a requirement for successful use of such scales by research participants (Finn, 1972). The same woman wanted Items 14 and 16 on the Colindex to be split as each dealt with two separate concepts. As these had been prepared in this way during Chan's (1994) initial development of the scale and had been found to discriminate as they stood, this change was also not made.

Only nine women noted how long it had taken to complete all material in the survey. Of these, one Turkish woman said it had taken 180 minutes to complete all materials. This amount of time was exceptional. Three other women said it had taken 25-35 minutes and a further five women, including the remaining two Turkish women, said it had taken 65 to 90 minutes to respond to all material. Clearly the survey did not demand excessive amounts of time for completion.

FINAL SURVEY

<u>Participants</u>

The final group of participants, again all volunteers, consisted of 131 women. Of these 38 were Anglo-Australian, 35 Chinese, 40 Turkish and 18 Indian. From this, four exclusions were made because it appeared that the husband had completed the questionnaires despite instructions to the contrary. A further one Turkish woman and two Indian women had lived in Australia for 25, 17 and 28 years respectively, placing themselves well outside the residence requirements for the study and these women's data were also excluded from the final analysis. This left a reduced final sample of 124, of whom 37 were Anglo-Australians, 33 Chinese and 38 Turkish and 16 Indians.

Demographic data included mother's age, child's age, education and employment of both mother and her partner/husband, number of siblings of the focus child, other adults living in the family home, ethnic identity of the mother and indicators of her acculturation. A brief description of each of these is given below, but where more detailed analysis of demographic data was undertaken this is included in Chapter 7: Results.

As with respondents in earlier phases of the study, mothers in this final phase were typically in their mid-30's and talked about a child who averaged about 7 years in age. Means and standard deviations for ages of both mother and child were as shown in Table 7 for each ethnic group and for the sample as a whole. Numbers of boys and girls, younger and older children in the total sample and within each ethnic group are provided in the Chapter 7: Results, together with the results of comparisons between groups.

Table 7

Age of Participants and Their Children

Age	Ethnic group				
	Anglo-A[a]	Indian	Chinese	Turkish	Whole sample
Mother					
M	38.5	34.1	37.7	30.6	35.2
(SD)	(4.3)	(4.3)	(2.8)	(4.3)	(5.2)
Child					
M	6.8	7.4	7.2	6.9	7.0
(SD)	(1.0)	(1.1)	(1.1)	(1.0)	(1.0)

Note: n = 121. No data for 1 Anglo-Australian, 1 Indian and 1 Chinese
a. Anglo-A = Anglo-Australian

The great majority (83.90%) of migrant women identified themselves by country of origin, responding "I am Chinese/Indian/Turkish," clearly adhering to their original

identity. Only 11 women (12.64% of the migrant sample) responded "I am (ethnic identity)-Australian" and 3 (3.45%) described themselves as Australian. One woman did not respond to this question.

Three questions looked at use of English. Comfort using English had a possible maximum score of 30, migrant women as a group obtained a mean score of 21.28 ($\underline{SD}$ = 5.43). Frequency of English language conversations, for which the possible maximum score was 24, yielded a mean score of 13.05 and standard deviation of 3.87. Analysis of these data by ethnic group is reported in Chapter 7. Reading preferences were mixed and analysis of these data did not reveal any significant differences between ethnic groups on this dimension.

On average, immigrant women in this study had lived in Australia for 6.90 years (SD = 2.88). Comparisons between the groups for time in Australia are reported in Chapter 7.

Of the 124 women in the sample, 118 women lived with their husband/partner. Only three Anglo-Australians, two Chinese woman and one Turkish woman had no husband/partner. In 1992, the rate of single parenthood in Australia as a whole was 13% (Shu, Khoo, Struik, & McKenzie, 1995), with a rate of 6.5% to 8.4% for the immigrant groups with which the present study is concerned (BIMPR, 1995a, 1995b, 1995c). Thus, in the present sample all groups showed levels of single parenthood below the community average.

No Anglo-Australians had any other adults besides their husband/partner living in the family home with them but a few of the migrant mothers lived in an extended family situation. For example, in addition to sharing her home with her husband one Indian woman also had her brother-in-law, sister-in-law and niece living in the family home. One other Indian woman's brother lived with the family, two others had their mother or mother-in-law living with them, their husband/partner and children. These families made up 18.75% of the Indian sample.

Two Chinese women, each with a husband/partner, had their mothers living with them and two more had both their father and mother resident in the family home, these extended families consisting 12.12% of this group. One Chinese woman reported that her husband was working overseas.

Although the great majority of Turkish women also lived in a nuclear family, seven families (18.42%) included members of the extended kinship group. Two of these women had a total of seven additional people sharing the family home. In each instance this included mother- and father-in-law, a brother-in-law and two sisters-in-law and two children. The remaining five Turkish women with additional adults sharing their home had one to four members of the extended family resident with them.

Because quite a lot of Australians live overseas for some part of their life, Anglo-Australians were asked a general question about how much of their lives they had lived in their home country. Options for selection were: Less than half my life, Most of my life, All of my life. Twenty-three (65.71%) reported that they had lived in this country for all of their lives, while the remainder had lived here most of their lives.

Educational attainments of women and their partners are shown for each ethnic group in Table 8. In general the women were well-educated, with the majority of Anglo-Australian, Indian and Chinese women holding some post-secondary school qualification. A smaller number of Turkish women had done any post-secondary training. A similar pattern can be found for these women's partners.

Table 8

Highest Educational Level Expressed as Percentage, by Ethnic Group

Highest educational level	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Women				
Some primary schooling				7.9
Completed primary school			3.0	23.7
Some secondary schooling	10.8		6.1	13.2
Completed secondary school	10.8	6.3	27.3	18.4
Post-secondary education	10.8	6.3	39.4	21.1
University degree	27.0	43.8	12.1	13.2
Post-graduate degree/diploma	37.8	43.8	12.1	2.6
No data	2.7			
Men[b]				
Some primary schooling				2.6
Completed primary school				10.5
Some secondary schooling	18.9	6.3	9.1	31.6
Completed secondary school	5.4		21.2	18.4
Post-secondary education	27.0	6.3	9.1	15.8
University degree	13.5	18.8	21.2	15.8
Post-graduate degree/diploma	27.0	68.8	33.3	2.6
No data	8.1		6.1	2.6

a. Anglo-A = Anglo-Australian   b. Women's reports of partner's education only

Occupational data, summarised in Tables 9 and 10, were ranked for status using Daniel's (1983) classifications for the Australian population. Male occupations, both in the country of origin and in Australia, were higher than that of their wives but, for both men and women, occupations reflected the generally high educational attainments of the sample. Again, the exceptional group were the Turks, who had a markedly lower socio-economic ranking than other ethnic groups. A more detailed analysis of educational and occupational data is reported in Chapter 7: Results.

Table 9

Percentage of Mothers at Each Occupational Level in Home Country and Australia.

Occupational level	Ethnic group						
	Anglo-A[a][b]	Indian		Chinese		Turkish	
		Home	Aust[c]	Home	Australia	Home	Aust[c]
1	0.0	6.3	6.3	0.0	0.0	0.0	0.0
2	13.5	6.3	6.3	9.0	3.0	0.0	2.6
3	34.8	37.6	25.1	33.3	18.2	7.9	5.3
4	5.4	6.3	6.3	21.2	15.2	2.6	0.0
5	13.5		12.5	24.3	6.0	26.2	7.9
6	2.7		0.0	6.1	6.1	5.2	47.4
No category							
Housewife	24.3	43.8	25.0	3.0	51.5	31.6	21.1
Unemployed	0.0		6.3				
Student						5.3	
No data	5.4		12.5	3.0		21.1	15.8

Note: Occupational level 1= highest socioeconomic status, level 6= lowest status.
a. Anglo-A = Anglo-Australian   b. Occupational level in Australia only
c. Aust=Australia

Table 10

Percentage of Husbands/partners at Each Occupational Level in Home Country and Australia

Occupational level	Ethnic group						
	Anglo-A[ab]	Indian		Chinese		Turkish	
		Home	Aust[c]	Home	Aust[c]	Home	Aust[c]
1	0.0	0.0	0.0	3.0	3.0	0.0	0.0
2	16.2	56.3	50.1	33.4	24.2	5.2	2.6
3	29.7	25.1	18.9	30.4	15.2	15.7	7.8
4	27.0	6.3	12.5	6.0	18.2	21.1	10.4
5	2.7		0.0	12.1	12.1	5.2	15.8
6	5.4		6.3	3.0	3.0	10.5	47.3
No category							
Unemployed			6.3		9.1		7.9
Working overseas					3.0		
No data	18.9	12.5	6.3	12.1	12.1	42.1	7.9

Note1: Occupational level 1= highest socioeconomic status, level 6= lowest status.
Note 2: Wife's reports only throughout.
a. Anglo-A=Anglo-Australian   b. Occupational level in Australia only
c. Aust=Australia

Group demographics for this final sample were very similar to those of the women who participated in earlier phases of the study. The occasional larger differences (e.g., differences in mean age of Turkish mothers in pilot and final studies) may have occurred because only small numbers of respondents from each ethnic group were interviewed or participated in the pilot study. A summary of demographic data for various sub-samples for all phases of the study can be seen in Appendix H.

Instruments

All instruments used in the pilot survey (CEQ, Colindex, Demographic data) were used in the final survey. It should be noted that items were unchanged from the pilot study. Minor amendments to instructions had been incorporated as described earlier in this chapter. Final versions of these instruments may be seen in Appendices C and I. Alpha reliabilities for the scales are described in Chapter 7: Results.

Procedure

Recruitment of women to participate in the final phase of this study was done by female members of each ethnic group, approached by the researcher in various ways.

Thirty-two Anglo-Australian respondents were recruited through female work colleagues and friends of the investigator. A total of 11 further sets of data were also obtained from parents of children at a local Catholic primary school where the principal sent out 16 sets of questionnaires on behalf of the investigator. The return rate, overall, for Anglo-Australians reached 81.25%.

One Indian woman recruited all Indian respondents. This recruiter posted out 37 sets of questionnaires to known Indian families and some of their acquaintances. She received only 18 back, a return rate of only 48.65%. This was despite follow-up phone calls made one to two weeks later and again, where necessary, six weeks after initial mail out. (It should be noted that a low level of response from Indian women is not unusual. Naidoo (1980) reported a "negligible" response to mailed out questionnaires in a study in Canada).

Three Hong Kong Chinese recruiters gathered data for the final study. The first was an active member of the local Chinese church, selected by the minister of the church who had been the initial contact and had been helpful earlier in the study. This one Chinese woman recruited 24 Chinese respondents from among her friendship group and contacts within the church although two of these subsequently returned blank questionnaires in

sealed envelopes. A further two Chinese recruiters were both teachers, one at a primary school in the Eastern suburbs of Melbourne, and the second at the Saturday morning school for Chinese children which was held on the same premises. These latter two recruiters obtained data from 13 women in total from 15 sets of questionnaires given out. No record was kept of the number of women approached who refused to participate in the study. Overall the rate of return of completed questionnaires for this group was 89.74%.

One Turkish recruiter had been recommended by a Turkish teacher-aide who had helped with recruitment for participants in the pilot study, while a second was recommended by a Turkish health worker at a medical centre specialising in working with immigrant families. These two Turkish women successfully recruited 20 respondents each from among their friendship groups and school and work contacts within the broader Turkish community. Again no record of unsuccessful approaches to possible respondents was kept but, of those who agreed to participate, the return rate of 100% could not be bettered. Turkish recruiters reported, however, that they had sat with the respondents as they worked through the set of questionnaires as many women were not familiar with tasks of this type.

Payments of $10.00 per completed set of data were offered but the way in which this was spent varied between groups according to the preference of the recruiter and after discussion of what would be most helpful in promoting the collection of data. Thus, each Chinese mother recruited through the Chinese church was paid $10.00 for completion of questionnaires, but the other Chinese mothers' payments were made to the Chinese Women's Association and the Chinese school respectively. The Indian and two Turkish recruiters saw the money as being earned by them and accepted payment on that basis, although one Turkish worker indicated that she intended to give it all to the Turkish Women's Association. Some Anglo-Australians were not paid as they were willing to complete the questionnaires freely, those recruited through the Catholic school earned this money for school funds, benefiting indirectly in this way.

All participants completed the set of questionnaires included in the appendices. The questionnaires were packaged in the same sequence for all sets, thus the letter about the

study (Appendix D3) and consent form (Appendix E) were on top of the set, followed by the CEQ and Colindex (Appendix I), and finally the demographic data questionnaire (Appendix C). Within the CEQ the order in which the subscales for Anger, Happiness, Sadness, Anger and Anxiety were presented varied systematically to avoid order effects. For each CEQ the subscale that was first in the previous set was placed last.

Also included in the package was an additional envelope addressed either directly to the investigator or to the recruiter. The envelopes could be sealed by the participant to ensure confidentiality if she required, and all envelopes that had been sealed and returned via a recruiter were received unopened. Where material was to be returned by post, return postage was paid.

All groups except Turkish women responded to an English language version of all questionnaires, while Turkish women worked with Turkish language materials.

ANALYSIS

Data analysis consisted of four components. Unless otherwise specified results of analyses are reported in Chapter 7 which follows.

1. Assessment of data quality. This involved description of and decisions about missing data and outliers and is included later in the present chapter. Internal consistency of the scales was also assessed.

2. Assessment of characteristics of the sample. The sample was described in terms of characteristics of the respondent and her family. The education and socio-economic status of all women and facility in English of migrant women was also described and differences between the four ethnic groups on these characteristics were reported.

3. Ethnic group responses to the Colindex were compared. Since groups were selected on the basis of cultural level dimensions described by Hofstede (1980), it was important to determine whether women in this sample showed patterns of cultural level values consistent with those which Hofstede reported.

4. Hypotheses predicting between-ethnic-group differences in patterns of emotional expression, within-group differences between boys and girls, and younger and older children were tested. Hypotheses predicting ethnic group differences in maternal concern about these behaviours were also tested.

Selection of Statistics for Testing Hypotheses

Hypotheses 1, 2, and 3 predicted differences in expression of emotion. Differences were expected to occur as preferences for certain sub-components of emotion (i.e,.one specific behaviour occurs more frequently or less frequently) rather than as absolutes (i.e., one specific behaviour occurs often or not at all). Similarly analysis of Hypothesis 5, which predicted that immigrants would worry more than Anglo-Australians required recognition of the fact that mothers' concerns about emotional behaviours were likely to be along a continuum and the statistic selected had to permit investigation of this kind of data. The statistic chosen for testing these hypotheses, therefore, was the discriminant function analysis. This statistic derives the linear combination of independent variables that best discriminate between a priori defined groups (Hair, Anderson, Tatham & Black, 1998). In the present instance different analyses required that these a priori groups were formed on the basis of children's age, gender, or ethnic group. Discriminant function analysis is not adversely affected by the unequal sample sizes (Tabachnik & Fidell, 1996) which were a feature of the data in these various analyses.

Discriminant function analysis makes "an effort to interpret the patterns of differences among the predictors as a whole" (Tabachnik & Fidell, 1996, p.508) with discriminants showing which combinations of variables are most sensitive to deviations from the null hypothesis (Timm, 1975). The simultaneous comparison of all behavioural descriptors, that is, all independent variables, is one of the advantages of discriminant function analysis when working with the kinds of data gathered in this study. In cross-cultural studies such as the present one the procedure also decreases the problem of loss of information which, Lester and Brazelton (1982) noted, occurs if scale scores and means are used, as is often the case when analysis of variance or multiple analysis of variance is the statistic of choice.

Discriminant function analysis was used to test all hypotheses except Hypothesis 4 which required comparison of percentages and for which no formal statistical analysis was possible. For the remaining hypotheses (Hypotheses 1, 2, 3 and 5) discriminant function analysis was applied to each of the eight subscales, four Behaviour and four Worry subscales separately. To demonstrate how much more information was available when item scores were used instead of scale scores two discriminant function analyses were performed for each subscale. In the first analysis scale scores were entered as independent variables, while in the second item scores were entered. For Hypotheses 2 and 3, which predicted within-group differences in behaviour, discriminant function analysis was applied to the Behaviour subscales for each ethnic group separately.

Some assessment of the generalisability of these results was made using the split samples technique. The procedure provides an estimate of the effect of shrinkage when sample results are applied to larger populations. This is achieved by deriving weights from half the sample and then applying them to the other half. The technique is recommended for use with large samples only (Tabachnik & Fidell, 1996), so has limitations in regard to the present, smaller, sample. It was, therefore, used only to provide cross-validation of results in the testing of Hypotheses 1 and 5. The subdivision of the data set required when testing Hypotheses 2 and 3 meant that the statistic was unsuitable for application to these latter data.

Where total scores were entered as variables the presence of missing values and of the extreme scores known as outliers, might have influenced results of discriminant function analyses. The presence of both missing values and outliers in the data, and decisions made with regard to each, is therefore considered.

Missing Data

The presence of missing values in data, while not influencing choice of statistic, may influence outcomes of analyses and needs to be considered. Hair et al. (1995) note that data may be missing for a number of reasons (e.g., problems with data collection or data entry) but commonly occurs because respondents have omitted answers. These omissions may be non-random (e.g., refusal to answer sensitive questions) or random.

These missing data can be left as they stand or, as has been a common practice in recent times, dealt with by substituting some artificially generated values using various methods. A common approach is mean substitution but regression methods may also be used (Tabachnik & Fidell, 1996). Each method of dealing with missing values brings its own disadvantages. Mean substitution distorts the variance estimates and understates the true variance. It also depresses observed correlations. Regression methods, too, have an impact on variance and correlations, in this instance the variance of the distribution is understated. The method also assumes the correlation between the missing data and data used in the regression is substantial (Tabachnik & Fidell, 1996).

Missing values depress total scores. They were likely to be important in the present study if there was evidence that they were markedly more common in one ethnic group than another so the rate of missing data on the ColIndex and for each of the eight subscales of the CEQ was calculated. For the ColIndex the percentage of missing values was extremely low. Only 1 of the 36 Anglo-Australian women who completed the questionnaire omitted any items, failing to answer 2 of the 16 questions. One Chinese woman also omitted 1 item. Neither Indian nor Turkish women omitted any items.

Missing values for the CEQ are shown in Table 11. While there was some variation between ethnic groups in frequency of missing values the table shows that for Happiness, Sadness, Anger and Anxiety less than 1% of values were missing for each subscale for Indian, Chinese and Turkish women. Anglo-Australian women were more likely to have returned questionnaires with missing values. This occurred because three Anglo-Australians missed the final page of some subscales. A similar pattern is shown for the Worry subscales, although actual frequencies of missing values were slightly higher.

Table 11

Percentage of Missing Data for Each Subscale of the CEQ

Subscale	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Behaviour Subscales				
Happiness	1.83	0.00	0.39	0.59
Sadness	2.80	0.25	0.22	0.29
Anger	1.93	0.00	0.29	1.57
Anxiety	1.05	1.08	0.68	0.42
Worry Subscales				
Happiness	1.79	1.08	1.08	0.59
Sadness	2.88	3.70	1.12	1.27
Anger	3.47	0.00	0.72	2.44
Anxiety	2.88	2.80	1.08	0.76

a. Anglo-A = Anglo-Australian

Where total scores were entered as variables in the discriminant function analysis the presence of missing data might have influenced results, although their infrequency and the spread of missing values among the ethnic groups makes this unlikely to have had a marked effect. Discriminant function analysis with items as variables omits cases that have missing values, and because this was the preferred form of analysis, it was not considered necessary to substitute for missing values. Data were, therefore, not modified in this way.

Outliers

Outliers are cases with extreme values (Tabachnick & Fidell, 1996). Perspectives on the nature of outliers and what should be done when they are discovered vary widely. Kirk (1982), for example, has described outliers as either "merely (an) extreme manifestation of the random variability inherent in the data" (p.139) or as the outcome of faulty procedures or equipment failures during data collection. He believes that only outliers caused by faulty procedures should be corrected.

Hair et al (1995, 1998) define outliers as observations whose unique combination of characteristics enable them to be identified as different from other observations in the same data set. These authors list an additional two reasons why outliers might occur over and above those listed by Kirk (1982). These are that the observation is the outcome of an extraordinary event, in which case the outlier may still be valid and, if so, should be retained. Alternatively there may be no explanation for the outlier and it should be deleted. They list a number of procedures for identifying outliers and have argued that some or all of these should be used when extreme scores are obtained. However, having identified genuine outliers, they advise that the investigator be extremely conservative in deciding which should be deleted, noting that the more extreme scores are eliminated from the analysis, the less generalisable the findings become.

Tabachnik and Fidell (1996) appear to be more concerned with the effect of outliers on statistics. They describe outliers as "cases with such extreme values on one variable or combination of variables that they distort statistics" (p.65). These authors also identify a number of reasons why a particular observation might be an outlier but the reasons they give differ again in some respects from those given by Kirk (1982) or Hair et al. (1995, 1998). In addition to general data entry problems and because they are more interested in data analysis, they note specifically that inaccuracy may occur through failure to identify missing data during data entry so that the computer reads missing data as genuine. In addition they note the possibility that a case might be one from outside the desired sample in which instance it should be deleted. It might, however, be from the desired sample and still be an outlier. In this latter case, they recommend with some emphasis that the case be retained but that the investigator consider changing the value on that particular variable "so that the case no longer has much impact" (p.66) on outcomes of statistical analyses.

It was clearly necessary to consider whether outliers occurred in each subset of the data and, further, how these outliers should be dealt with. Some difficulties arose in deciding which outliers to consider. In some subscales of the CEQ, for example, different scores were identified as extreme scores depending on whether the whole sample was

considered or whether the data were inspected by ethnic group. Since all major analyses were to be based on comparisons between ethnic groups, the latter choice seemed to be more appropriate and data were therefore explored on this basis.

In the present study outliers were investigated using box plots. Box plots look at the clustering of values around the median. Cases whose scores fall far away from the values boxed around the median are extreme. Using this method only one outlier, an Anglo-Australian with an unusually low score, was found on the Colindex but boxplots revealed a total of 23 different respondents producing outlier scores in the Children's Emotions Questionnaire. Two of these, both Turkish respondents, produced scores at the extreme of the range for their ethnic group on two subscales. Outliers occurred in all subsections of the latter questionnaire except Sadness Behaviour, and among all ethnic groups. In total 13 outliers were found in the Behaviour subscales and 12 in the Worry subscales.

Among the Anglo-Australian, and Chinese sub-groups outlier values were infrequent (three Anglo-Australians, and three Chinese) but Indian and Turkish respondents produced outlier values much more commonly with 37.50% of Indian and 31.58% of Turkish participants producing total scores identified as outliers on one or other of the eight subscales. For both these groups outliers were more likely to be found on one subscale, for Indians this was the Anxiety subscale where four outlier scores were found, while Turkish results produced a cluster of five outlier scores on the Happiness Worry subscale. Only three of these outlier scores were identified as very extreme, two on the Happiness Worry and one on the Anxiety Behaviour subscales. All outliers were further checked for incorrect data entry but were found to be accurate.

The decision about how to deal with these extreme scores in the present study was made more difficult by the limited amount of research into patterns of response of members of different ethnic groups. The relatively higher percentage of outliers among the Turks and Indians may indicate that extreme responses are common among these ethnic groups while they are less common among Anglo-Australians and Hong Kong Chinese. In both instances, then, the presence of outliers could represent the "random variability" (Kirk, 1982) of the data. Removal or modification of extreme scores would possibly

result in loss of valuable information about the groups and the decision was therefore taken not to use any procedures to reduce the effect of outliers. All subsequent analyses treated these data in the same way as any other.

Conclusion

The decision not to replace missing data with generated values, nor to exclude outliers, may have influenced the results. The impact of missing data was likely to be small, especially since data from respondents who omitted items were excluded during application of discriminant function analysis to data where items were entered as variables. Retaining outlier scores had the potential advantage of giving a more accurate picture than would have been obtained if they were modified.

CHAPTER 7: RESULTS

DATA CHECKS

As described in Chapter 6, Using the Questionnaires, data from 7 of the 131 participants were deleted for various reasons, leaving a corrected final sample consisting of responses from 124 women. Ten percent of all data for these participants were checked for accuracy, revealing two errors. During inspection of the data a further 12 entry errors were discovered, giving an error rate of 0.04% in total. Further checks for quality of data included searching for missing data and for outliers. These findings are reported in the section "Analyses" in Chapter 6. The possibilities that some or all ethnic groups showed an extreme response set and that there were demographic differences between the ethnic groups were also investigated.

Extreme Response Sets

The frequency with which the different ethnic groups used the end points of ipsative scales, the Colindex and the various Worry subscales on the Children's Emotions Questionnaire was assessed. When numbers of responses at end points were calculated as a percentage of all possible responses for Happiness Worry, Sadness Worry, Anger Worry and Anxiety Worry differences between groups were as shown in Table 12. The difference was limited to the lower end point where about 50% of Indian and Turkish women consistently indicated that they never worried about their children's emotional expression of negative emotions. As expected the percentage of women who never worried about Happiness was higher than for the three negative emotions for all ethnic groups.

Table 12

Use of Worry Scale End-Points, as Percentage of Possible Selections.

Worry Subscale	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Happiness				
Never	77.82	55.65	52.87	84.97
Almost Always	0.81	7.39	5.63	0.60
Sadness				
Never	25.95	55.85	27.81	47.58
Almost Always	6.57	0.51	5.45	4.54
Anger				
Never	20.21	51.19	25.53	45.82
Almost Always	13.61	1.75	11.64	6.88
Anxiety				
Never	17.59	46.46	26.68	53.12
Almost Always	8.44	5.53	6.84	4.02

a. Anglo-A = Anglo-Australian

Responses on the Colindex, presented in Table 13, showed that Indian and Turkish women were more likely than Anglo-Australians and Hong Kong Chinese to use the end-points of the scale and, in this instance, were particularly likely to strongly agree with statements. Differences were consistent with responses to findings relating to the Worry subscales. Together, these results suggested possible general differences in the propensity of the ethnic groups in the present sample to show extreme response sets which were likely to influence subsequent findings.

Table 13

Use of Colindex End-points, as Percentage of Possible Selections

Colindex end-point	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Strongly disagree	0.80	9.38	4.36	13.32
Strongly agree	18.99	30.47	18.03	42.27

a. Anglo-A = Anglo-Australian

Internal Consistency of the Scales

Cronbach's coefficient alpha (Cronbach, 1951) was used to assess the extent to which tests were internally homogeneous. This statistic was applied to each subscale of the CEQ (Happiness, Happiness Worry, Sadness, Sadness Worry, Anger, Anger Worry, Anxiety, Anxiety Worry) with results showing high levels of internal consistency on each of these subscales. These are as shown in Table 14.

Table 14

Cronbach's Coefficient Alpha for the CEQ

Emotion	Subscale	n	alpha
Happiness	Behaviour	109	.94
	Worry	103	.98
Sadness	Behaviour	113	.87
	Worry	98	.96
Anger	Behaviour	112	.94
	Worry	93	.96
Anxiety	Behaviour	106	.90
	Worry	100	.97

The Colindex was also investigated using Cronbach's coefficient alpha (Cronbach, 1951). Because the test consists of items measuring opposing values, Items 1, 3, 5, 7, 9, 11, 13, and 15 measuring collectivist values while the remaining 8 items measure individualist values, the test was initially divided along these lines with separate alpha's calculated for each part. For the collectivist items a Cronbach's alpha of 0.62 was obtained. Individualist items were a less homogeneous, with a resultant alpha of 0.46. Reverse scoring of Individualism items yielded an alpha reliability of 0.50 for the whole Colindex. These reliabilities are low but consistent with the accepted reliabilities for scales measuring attitudes (Anastasi, 1988).

Alpha reliabilities for the scales assessing frequency of English conversation and comfort when speaking in English were .72 and .93 respectively.

Demographic Characteristics of the Sample

Demographic data for the four ethnic groups were analysed to determine whether they differed along any of the dimensions measured. One way analysis of variance (ANOVA) for independent means with correction for repeated observations was used to discover these differences. The correction for multiple observations was made using the Scheffe test, generally described (e.g., Kirk, 1982; Tabachnik & Fidell, 1996) as the most conservative and flexible of the corrections available.

The Respondents

Of the 124 participants in the final sample 37 were Anglo-Australians, 16 Indian, 33 Chinese and 38 Turkish. The mean age for Anglo-Australian women was 38.50 years ($\underline{SD}$ = 4.25), for Indian women it was 34.07 ($\underline{SD}$ = 4.27), while for Chinese and Turkish women it was 37.66 ($\underline{SD}$ = 2.84) and 30.61 ($\underline{SD}$ = 4.30) years respectively. A one way ANOVA for independent means showed that age differences between mothers were significant (F(3, 117) = 30.17, $\underline{p}$ <.05). Anglo-Australian and Chinese mothers were both significantly older than Indian and Turkish mothers but not significantly different from each other. Indian mothers were also significantly older than Turkish mothers.

No significant differences were found between Anglo-Australian, Indian and Chinese women's highest level of education, nor between that of their husbands/partners, but

both men and women in these three ethnic groups had significantly more education than the Turkish respondent of the same gender ($F(3, 119) = 18.83$, $p < .05$ for women; $F(3, 114) = 13.38$, $p < .05$ for men).

Since education and socio-economic status are related it was expected that a similar pattern would exist for occupations. Information on socio-economic status was analysed for women and men separately using Daniel's (1983) ratings for occupations in Australia. The large number of women who gave their occupation as "Housewife," both in their home country (16.13%) and in Australia (27.42%), restricted availability of socio-economic status data for this group. It was also noticeable that while 93.9% of Hong Kong Chinese women who had worked in Hong Kong only 45.5% of them were working in Australia. One-way analysis of variance of women's socio-economic status in their home country showed significant differences ($F(2, 53) = 6.74$, $p < .05$) with Turkish women's occupations of lower status than Indians. Indian and Chinese women were not significantly different. Similarly, for mothers' employment in Australia, ANOVA revealed significant differences between ethnic groups ($F(3, 70) = 15.67$, $p < .05$) with Turkish occupying significantly lower status positions than all other groups.

For these women's husbands/partners the same pattern was found. Differences between ethnic groups were significant, but it was the lower status of Turkish men, both in Turkey and in Australia, in relation to all other groups which explained the result. (For country of origin: $F(2, 62) = 8.73$, $p < .05$; for Australia: $F(3, 97) = 19.95$, $p < .05$).

As noted in Chapter 6, immigrant women in this study had lived in Australia for 6.90 years ($SD = 2.88$) on average. Turkish women had lived in Australia for the longest ($M = 8.26$ years, $SD = 2.59$), with Hong Kong Chinese averaging 5.58 years ($SD = 2.76$) and Indians averaging 5.57 years ($SD = 2.50$). One way ANOVA showed significant differences between the migrant groups in length of residence in Australia ($F(2, 84) = 9.44$, $df = 2$, $p < .05$), with Turkish women having lived in this country longer than Chinese. There were no differences between Chinese and Indian women.

Acculturation of Immigrant Respondents

Measures of acculturation, including ethnic identity, number of English conversations, and comfort during conversations in English, were also compared by ethnic group. As noted in Chapter 6, almost 84% of migrant women continued to identify themselves by their country of origin, with a few of each ethnic group using the descriptor "I am (ethnic group)-Australian.

Frequency of English conversation. Means and standard deviation scores for frequency of conversations in English and comfort using English for each immigrant ethnic group are shown in Table 15 below.

Table 15

English Use, Immigrants Only

English use	Ethnic group		
	Indian (n = 16)	Chinese (n = 33)	Turkish (n = 38)
Frequency of conversation[a][b]			
M (SD)	16.30 (3.89)	13.30 (3.35)	11.60 (3.62)
Comfort using English[a][c]			
M (SD)	26.76 (2.95)	22.33 (3.97)	18.13 (5.31)

a. = Conversations in last month b. = Possible range 6 - 24 c. = Possible range 6 - 30

Scores for frequency of conversations across the range of settings were summed and analysed using one way ANOVA. Differences between groups were significant ($F_{(2, 84)}$ = 8.84, $p < .05$) with Indian and Chinese groups having more conversations in English than the Turkish mothers.

Turkish and Hong Kong Chinese women spoke English less frequently in each of the situations listed than Indian women although only some of these differences reached significance (see Appendix J1 for details). Indian women were more likely to have used English socially (e.g., talking to a neighbour, talking to an Australian friend) in the

month prior to data collection than Chinese, but Chinese used English to deal with problems of daily living (e.g., talking to a service provider) more than Turkish women. Even at the practical level of doing shopping over 15% of Turkish women reported having no English conversations.

Comfort Using English. Scores for comfort using English were summed and one-way ANOVA showed that differences between migrant groups on this dimension were significant ($F_{(2, 84)} = 21.55$, $p < .05$). Indian and Chinese women's comfort with speaking English was greater than that of the Turks and additionally Indian women were generally more comfortable than Chinese speaking English.

Analysis of responses to individual items showed that differences between ethnic groups were significant for all items (See Appendix J2 for details). For example, Indian and Chinese mothers reported feeling more comfortable than Turkish women when using English while shopping, asking directions, or talking to the child's teacher.

Thus, although members of the different ethnic groups maintained their original description of themselves as Chinese, Indian or Turkish, there is some evidence to suggest that Indians, with their greater competence in English than Turkish and Hong Kong Chinese women might have been more acculturated to Australian culture than the two other migrant groups. The Chinese women in this sample might also have differed from the Turkish women in this regard, despite the fact that the Turkish women had lived in Australia for significantly longer than the Chinese.

The Children and Their Siblings

Ages of children in the various ethnic groups whose behaviour was being reported by their mothers are shown in Table 16, overleaf. A one-way ANOVA for independent means showed there were no significant differences in ages of children in the four ethnic groups ($F_{(3, 120)} = 1.88$, $p = .14$).

As is shown in Table 16, children of immigrant women were more likely to be first-born members of their families than were Anglo-Australian children. Turkish mothers were most likely to discuss a child who was the first-born member of the family. Anglo-

Australian children were likely to have two siblings while Indian, Chinese and Turkish children were more likely only to have one. Chinese children were the most likely of the total sample not to have any siblings at all.

Table 16

Child and Family Demographics

Target child	Ethnic group			
	Anglo-A[a] (n = 37)	Indian (n = 16)	Chinese (n = 33)	Turkish (n = 38)
Age: $\underline{M}$	6.8	7.4	7.2	6.8
($\underline{SD}$)	(1.0)	(1.1)	(1.1)	(1.0)
Gender				
Male	16	8	19	21
Female	21	8	14	17
Birth position as percentage				
1st	24.3	50.0	51.5	63.2
2nd	43.2	50.0	27.3	36.8
3rd	21.6		9.1	
4th or later	10.9			
Unknown			19.1	

a. Anglo-A. = Anglo-Australian

Children in this sample came from slightly larger families than average, both for Australia as a whole and within the various ethnic groups and were therefore less likely to be only children. The average family size of 2.3 for the whole group was distorted upwards by the average for Anglo-Australians which was 2.8 children per family. The minority groups had average family sizes ranging from 2.0 to 2.1, much closer to the Australian fertility rate of 1.9 children per female (Shu, Khoo, Struik, & McKenzie, 1995).

Conclusion

Anglo-Australian, Hong Kong Chinese and Indian women in this sample resembled each other on the demographic dimensions measured. Turkish women were less like the

other three ethnic groups, being younger, less well-educated and of lower socio-economic status. Turkish men also shared these characteristics, unlike the husbands of women in the other three ethnic groups. However, there were no significant differences in age between the children whose emotion-related behaviours mothers from the four ethnic groups were describing.

BETWEEN-GROUPS ANALYSES

Individualism and Collectivism

Before analysis of mothers' responses to the Children's Emotions Questionnaire could be undertaken it was necessary to consider whether the four ethnic groups selected did differ along the Individualism-Collectivism dimension as suggested by Hofstede (1980) and described in Chapter 3. According to Hofstede Australians were the most individualistic, Indians less so, followed by Turkish respondents and then Hong Kong Chinese. Because Hofstede's data had been used as a criterion for selection of ethnic groups in the study it was necessary to determine whether his findings were confirmed for the present sample. This was done through analysing scores on the Colindex using ANOVA.

The scale was divided into the two subscales consisting of those items measuring Individualism and those measuring Collectivism. Mean scores for the four ethnic groups for Individualism were all around 35 (out of a possible maximum of 56) and the scale failed to discriminate between groups ($\underline{F}$(3,119) = 0.06, df = 3, $\underline{p}$ = .98). Mean scores for the Collectivism subscale were more varied between groups and this subscale discriminated between the groups ($\underline{F}$(3, 119) = 19.40, $\underline{p}$ < .05). Anglo-Australians ($\underline{M}$ = 37.1, $\underline{SD}$ = 5.8) were less collective than all other ethnic groups (Indian $\underline{M}$ = 45.0, $\underline{SD}$ = 5.8; Hong Kong Chinese $\underline{M}$ = 41.4, $\underline{SD}$ = 5.1; Turkish $\underline{M}$ = 47.0, $\underline{SD}$ = 9.3) and Chinese were also significantly less collective than Turkish women.

These results provided only partial evidence that the present sample resembled that of Hofstede (1980). The four different ethnic groups differed in Collectivism in ways which were similar to those expected, although rankings for the Chinese and Turkish women were reversed. Anglo-Australian women were least collective of the present

sample, and migrant women markedly more so. The lack of significant differences on the Individualism dimension suggests that these women were also unlike Hofstede's sample in some ways.

DIFFERENCES IN EXPRESSION OF EMOTION

As the Colindex had provided some evidence of culture level differences between ethnic groups, hypotheses predicting differences in emotion-related behaviours were also investigated. Discriminant function analysis of scale items was used since it was expected that differences between groups would be subtle, and include differences in frequency with which components of emotion-related behaviours occurred rather than in absolute presence or absence of behaviours. Of particular interest were those items with highest pooled within group correlations with the first and in some instances the second function, these are the items which contribute most towards explaining the between-group variance in each emotion.

It should be noted that the number of functions generated by the discriminant function analysis is one less than the number of groups about whom predictions have been made. Therefore three functions are derived when comparisons between ethnic groups are being made, while for within groups comparisons of younger and older children or boys and girls, only one function is derived. In this latter case, all items contribute to that function and together explain all the variance.

Differences Between Ethnic Groups

Discriminant function analysis was used to test Hypothesis 1, which predicted that children from different ethnic groups would show different patterns of behaviour for each emotion. With subscale scores as variables the discriminant function correctly classified only 30% to 40% of cases. These classification rates were only a little above chance (Hair et al., 1998) and were associated with only partial confirmation of the hypothesis. Between group differences for Happiness and Anger reached significance but those for Sadness and Anxiety were not significant. Results of these analyses are detailed in Table 17.

Table 17

Between Ethnic Group Differences in Emotional Behaviours Using Subscale Scores

Emotion	Ethnic group				
	Anglo-A[a]	Indian	Chinese	Turkish	χ^{2b}
Happiness					
M	79.95	70.93	74.61	61.84	12.31*
SD	20.88	28.86	23.45	20.06	
Sadness					
M	25.68	24.87	30.55	25.95	3.46
SD	10.00	15.33	14.89	12.86	
Anger					
M	39.54	24.13	42.52	35.95	8.65**
SD	19.01	16.27	22.72	35.95	
Anxiety					
M	21.86	20.00	28.70	25.86	6.50
SD	10.49	11.63	17.98	12.10	

Note. df = 3 throughout
a. Anglo-A = Anglo-Australian
* p < .01   ** p < .05

Follow-up analyses to discover which particular items contributed most to these results were also undertaken. This involved using the each item as a predictor variable, instead of subscale scores. Using items as variables resulted in much higher rates of correct classification with between 77% and 85% of predictions about group membership being correct. Correct classification rates were deemed satisfactory being more than 25% above chance (Hair et al., 1998). It is noted that the much higher number of degrees of freedom used in this kind of analysis increases the likelihood of Type II error.

For each emotion three discriminant functions were obtained, each contributing part of the explanation of variance between groups. As expected, more significant differences were obtained when individual items were entered into the analysis, the differences between Tables 17 and 18 showing the degree to which real differences in relationships between the items and the underlying variables are confused by summing them all

together. With items as variables a pattern of extremely high significance for the first of the combined chi-squares, a slightly lower level of significance for the second chi-square, after removal of the first function, and no significance for the last chi-square was repeated for all four emotions. These results are also evident in Table 18.

Table 18

Results of Discriminant Function Analysis of Behaviour Subscales, Items as Discriminants.

Emotion	Functions	Test for difference		
		χ^2	df^a	p
Happiness	1 to 3	197.65	93	< .0001
	2 and 3	90.89	60	< .01
	3 only	33.37	29	.43[b]
Sadness	1 to 3	190.78	81	< .0001
	2 and 3	102.62	52	< .0001
	3 only	26.64	25	.37[b]
Anger	1 to 3	214.50	126	<.0001
	2 and 3	114.02	82	< .05
	3 only	48.18	40	.17[b]
Anxiety	1 to 3	183.14	93	< .0001
	2 and 3	94.28	60	< .05
	3 only	34.16	29	.23[b]

Note. a. Only questionnaires without missing items included in analysis when items entered as variables, so df vary.
b. not significant

Although all items contribute to all discriminant functions those with highest pooled within group correlations with each function contribute more strongly towards the explaining between group variance. These items were therefore further considered to discover whether they constituted a cluster of related behaviours for each function or

not. Mean scores of mothers from different ethnic groups tell about patterns of response to these items and were also further assessed for each emotion. These will now be discussed separately.

Happiness

As can be seen in Table 18, when items were entered into the analysis for Happiness the combined chi-square for all three functions was highly significant at $p < .0001$. After removal of the first function the relationship between predictors and ethnic groups was still significant, at $p < .05$. These first two functions explained respectively 62.8% and 24.8% of the between- group variance. This left a residual third function whose contribution to explaining the variance between groups was not significant.

Items with highest pooled within group correlation with Functions 1 and 2 for Happiness each consisted of a mixture of physical behaviours (e.g., Giggles or laughs; Skips or dances) and social behaviours (e.g., Puts arm around other when walks; Kisses someone in the family) along with a few physiological and cognitive indicators (e.g., Body is very relaxed; Concentrates well on activity). All items with highest pooled within group correlations with the two functions are shown in Table 19.

Table 19

Items with Highest Pooled within Group Correlations for Happiness

Function	Descriptors with highest pooled within group correlations
1	Puts arm around others as walks; Giggles or laughs; Plays imaginary games; Smiles; Sings or whistles; Gestures more than usual; Plays well without close parental supervision; Talks more than usual; Stands up tall or straight; Pretends to fight others; Fidgety, has lots of energy but doesn't know how to use it; Speaks more loudly than usual
2	Looks straight at other people; Gives someone in the family a hug; Body is very relaxed; Kisses someone in the family; Concentrates well on activity; Face looks "bright", has pleasant expression; Moves quickly or energetically; Says "I'm so happy" or similar; Skips or dances; Jumps over furniture or runs around inside the house; Voice sounds a bit higher or tone of voice changes

Highest pooled within group correlations with each function were uniformly low, with only the first two in each list in Table 19 above 0.3. Mean scores and standard deviations (detailed in Appendix K1) showed that there was considerable within ethnic group variation which contributed to low correlations. Despite this variability the discriminant function analysis correctly predicted 80.7% of ethnic group membership.

For items with highest pooled within group correlation with Function 1 on the Happiness subscale, Anglo-Australian and Chinese mothers were equally likely to obtain highest mean scores, indicating that they saw these behaviours more frequently than mothers in the two remaining ethnic groups. Turkish women had the lowest mean scores indicating that they saw these behaviours less frequently than mothers in other groups. For items with the highest pooled within group correlations with Function 2, Anglo-Australian women obtained the highest mean scores, Indian and Chinese women had similar scores and Turkish women were least likely to report seeing these behaviours.

<u>Sadness</u>

For Sadness, both the first and second chi-squares contributed strongly towards explaining between-group differences, being significant at $p < .0001$. Together the first two functions explained 89.4% of the between- group variance despite the within group variability in responses which is evident in the standard deviations (shown with Means in Appendix K2).

Table 20 shows that for Sadness, items associated with each of Functions 1 and 2 formed clusters of related descriptors, those with highest pooled within group correlations with Function 1 being primarily descriptors of physical indicators of sadness (e.g., Face "falls" or looks serious, Voice changes in tone or pitch) while those with highest correlations with Function 2 were more likely to describe coping strategies (e.g., Cuddles soft toy; Sits, doing nothing).

Table 20

<u>Items with Highest Pooled Within Group Correlations for Sadness</u>

Function	Descriptors with highest pooled within group correlations
1	Giggles briefly; Closes lips tightly, or mouth turns down at corners; Cries quietly; Face "falls" or look serious; Speaks slowly and/or softly; Voice changes in tone or pitch
2	Eyes lacklustre or dull; Cuddles soft toy; Cuddles or hugs sibling or parent; Sits, doing nothing; Speaks rudely or calls others names; Wants to be close to parent without cuddling; Pulls away from hugs or other touch; Lies on bed, head and body completely covered.

No clear pattern was found for any one ethnic group to have highest mean scores for Sadness but again, despite this, correct predictions of ethnic group were made on average for just under 80% of respondents. Prediction for Indians was not good at 57% accuracy but for the remaining three ethnic groups it was much better (Anglo-Australians - 81%, Chinese - 74% and Turks - 83%).

<u>Anger</u>

Functions 1 and 2 of Anger, with items as variables, together explained over 80% of the between-groups variance. As can be seen in Table 21 items which contributed most to explaining the between-groups variance on Function 1 of this subscale included several physiologically driven changes associated with anger or outcomes of such physiological change (e.g., Eyes go red; Speaks more quickly than usual). Those with highest pooled within group correlations with Function 2 described aggressive behaviours towards the self or some other person (e.g., Hits or punches; Kicks). Again highest pooled within group correlations with the function were uniformly low, only the first item listed in Table 21 for each function had a correlation above 0.3 with that function, and only the second, third and fourth items listed for Function 2 correlated above 0.2 with this second function.

Table 21

<u>Items With Highest Pooled Within Group Correlations for Anger</u>

Function	Items with highest pooled within group correlations
1	Eyes go red; Face gets red; Cries quietly with anger; Speaks more quickly than usual; Says "You don't love me" or similar; Stays silent; Overturns furniture.
2	Shouts; Blames others, e.g., Says "It's your fault"; Hits or punches others; Pushes, pinches or smacks other person; Hurts self e.g., Pulls own hair, pinches self; Gets into physical fights; Kicks; Voice gets higher.

For this emotion the discriminant function analysis correctly predicted ethnic group membership for 93% of Indians and for more than 80% of the remaining three ethnic groups. Mean scores for items, which can be seen in Appendix K3, show that Turkish mothers were most likely to report observing physical changes in their angry children. Chinese mothers were most likely, and Indian mothers least likely, to report seeing aggressive behaviours when their children were angry.

<u>Anxiety</u>

Function 1 of Anxiety explained 54.5% and Function 2, 30.6% of the between groups variance with both the first and second combined chi-squares reaching significance as shown previously in Table 18. Items with highest correlations with both Functions 1 and 2, presented in Table 22, did not form clearly related clusters and there was also little consistency in patterns of response of the different ethnic groups, that is, there was no pattern of high or low scorers within either Function 1 or 2 (see Appendix K4). However, this absence of systematic variation did not restrict the capacity of the discriminant function analysis to correctly predict ethnic group membership. Anglo-Australians and Hong Kong Chinese responses correctly predicted 90% of their group while Indian and Turkish responses permitted correct prediction to be made for around 77% each.

Table 22

<u>Items With Highest Pooled Within Group Correlations for Anxiety</u>

Function	Descriptors with highest pooled within group correlations
1	Does nothing; Refuses to do feared activity; Says "I can't do it" or "I won't do it"; Awake during the night thinking about feared event; Sits close to parent, but does not cling; Speaks softly; Says "I'm not feeling well" or "I have a stomach ache" or similar; Stays silent.
2	Cries; Goes pale; Doesn't look at people, avoids eye contact; Deliberately annoys others; Cuddles soft toy or blanket; Is restless; Breathes quickly; Complains of dreams concerning feared event; Picks at food or wants more sweet food than usual.

<u>Cross-validation of Results</u>

Cross-validation of results showing between-ethnic-group differences in expression of emotion was obtained using the split samples technique described by Tabachnik and Fidell (1996). Use of this technique showed that, although there was a reduction in the accuracy of prediction overall, the results obtained were still satisfactorily high. An

average of about two-thirds of the complete sample was correctly placed for the four emotions. The result was obtained despite the fact that the sample was smaller than optimum for use of this statistical procedure.

Influence of Demographic Variables

In order to determine the extent to which characteristics of the sample contributed to these differences the discriminant function analyses were repeated with Mother's Age and Mother's Education entered as additional variables. These two demographic characteristics were selected because they have been shown in many studies to be associated with variations in child development outcomes (Bronfenbrenner, 1988; Entwisle & Astone, 1994; Hauser, 1994; Hoff-Ginsberg & Tardif, 1995). The latter also gives some indication of socio-economic status.

Mother's Age contributed towards explaining the variance on the first function for each of Happiness, Sadness and Anxiety, being the item with the highest pooled within group correlation with Function 1 for each of these subscales. Mother's Education correlated most highly with Function 3 for all of these subscales, and therefore contributed little towards explaining between group variance in expression of these emotions. For Anger, Mother's Education had the highest pooled within group correlation with Function 1, while Mother's Age correlated highly most highly with Function 2. The amount of between-group variance explained by Function 1 when these variables were included also increased by 1.5% for Anxiety to 5.7% for Sadness, with Anger and Happiness falling between these extremes.

Inclusion of these two demographic variables also resulted in changes in the relationship of some items to the functions. These mostly included changes between Functions 1 and 2. For example, for Sadness, Items 03, 04 and 23 which had previously had highest correlations with Function 1, now had highest correlations with Function 2 while for items 05, 10, 14 and 25 the reverse change occurred. For Anger, the changes were more marked, as two items changed from having highest correlations with Function 1 to correlating most highly with Function 3. This latter pattern applied to one item for

Anxiety. (See Appendices L1 - L4 for details). It was clear, however, that these changes did not alter the overall trend for Chinese mothers to report seeing behaviours more frequently than any other ethnic group.

Conclusion

The results showed that Anglo-Australian, Hong Kong Chinese, Indian, and Turkish children were perceived by their mothers as showing behaviours indicative of emotion with different frequencies. The Chinese children were described as showing a large number of emotion-related behaviours more frequently than children from the other ethnic groups. Indian children were commonly described as showing these behaviours least frequently of the four ethnic groups in the study. Finally, Anglo-Australian and Turkish children reportedly showed a more mixed pattern with frequency of emotional behaviours varying with emotion. These results were little altered by the inclusion of the demographic variables of Mother's Age and Mother's Education in the data analysis, except in the instance of Anger.

Differences Between Boys and Girls Within Ethnic Groups

Hypothesis 2 stated that boys and girls of the same ethnic group would express their emotions differently, and that this would be true for all four ethnic groups. This hypothesis was only partly confirmed when subscale scores were entered as variables but more strongly confirmed when items were entered in the discriminant function analysis. This is reflected in the rate of correct classifications which was acceptable for all ethnic groups for subscale scores but was markedly higher with items as variables as can be seen in Table 23.

Table 23

Percentage of Correct Predictions of Gender Within Ethnic Groups for Four Emotions

Emotion	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Subscale scores as variables				
Happiness	62.2	60.0	57.6	52.6
Sadness	56.8	60.0	66.7	55.3
Anger	56.8	60.0	66.7	60.5
Anxiety	56.8	66.7	63.6	55.3
Items as variables				
Happiness	100	100	100	100
Sadness	100	92.9	100	91.7
Anger	96.8	93.3	100	97.2
Anxiety	100	100	100	100

a. Anglo-A = Anglo-Australian

This improvement in accuracy of prediction when items were entered in the discriminant function analysis was reflected in results when tests for significance were applied as is evident when Tables 24 and 25 are compared. As can be seen in Table 25 which shows results when items were entered as variables in the discriminant function analysis, the hypothesis of gender-related differences was confirmed for all four emotions for Chinese children, for Happiness and Anger for Anglo-Australians and Turks, and for Anxiety for Indians and Turks. As in the analysis of Hypothesis 1, the greater number of significant differences obtained when individual items were tested shows the degree to which real relationships between items and the underlying variables are confounded by summing them all together.

Table 24

Differences Between Boys and Girls Within Ethnic Groups, Using Subscale Scores

Emotion	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Happiness				
χ^2	1.79	0.27	0.90	0.63
Sadness				
χ^2	0.17	0.77	5.94^{**}	0.14
Anger				
χ^2	0.00	0.40	4.36^{*}	3.47
Anxiety				
χ^2	0.00	3.79^{*}	3.17	0.05

Note: $df = 1$ throughout
a. A-Aust = Anglo-Australian
$* p < .05$ $* *p < .01$

Table 25

Differences Between Boys and Girls Within Ethnic Groups, Items as Discriminants

Emotion	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Happiness				
χ^2	75.73****	11.20	40.93*	60.64***
df	30	13	27	30
Sadness				
χ^2	32.04	10.63	58.45****	21.37
df	27	12	27	26
Anger				
χ^2	47.74**	13.07	69.79****	59.10**
df	28	13	30	33
Anxiety				
χ^2	31.27	26.55**	41.38*	76.58****
df	28	11	27	31

Note. Only questionnaires without missing items included in analysis when items entered as variables, so df vary for different emotions within ethnic groups.
a. Anglo-A = Anglo-Australian
*$p < .05$ **$p < .01$ ***$p < .001$ ****$p < .0001$.

Where items were tested individually in the discriminant function analysis the patterns of behaviour associated with significant differences between boys and girls varied according to ethnic group and emotion. (Some examples of such differences are presented in Appendices M1 to M4.) For Anglo-Australians, for example, analysis of Happiness showed that boys obtained higher mean scores on just over two-thirds of items. These items included physical, social, and coping behaviours as did the nine items for which girls had the highest mean scores. Thus, Anglo-Australian mothers were reporting seeing happy behaviours more often on the part of their sons. For Anger, however, Anglo-Australian children obtained highest mean scores on approximately half the items each. Mothers perceived boys as showing some behaviours more frequently than girls when expressing anger, while girls showed other behaviours more frequently than boys did to express this emotion.

Indian mothers reported significant differences in their children's behaviour only in relation to anxiety. On the Anxiety subscale Indian girls obtained higher mean scores than boys on 24 of the 31 items, showing that mothers perceived their daughters as expressing anxiety more frequently than boys.

Chinese mothers, as shown in Table 25, reported differences between their sons and daughters in expression of all four emotions investigated. For Happiness, the mean scores showed only that boys and girls express this emotion differently. They were equally likely to have the higher mean score on particular items but mothers perceived their sons as showing some behaviours frequently when expressing happiness while girls showed other behaviours more frequently to express the same emotion.

For the three negative emotions, Sadness, Anger, and Anxiety, Chinese mothers reported that their sons showed a broad range of behaviours more often than girls did. This is reflected in the large number of items for which boys obtained higher mean scores than girls on all three subscales. Chinese boys obtained higher mean scores than girls on 23 of 27 items measuring Sadness, 36 out of 42 items for Anger and 26 out of 31 Anxiety related behaviours.

Turkish children showed significantly different behaviours according to gender for Happiness, Anger and Anxiety. Girls reportedly showed a broad range of Happiness related behaviours more often than boys, as reflected by their higher mean scores on 24 of 31 items. For Anger the reverse pattern was obtained, with mothers reporting higher frequency of Anger on the part of their sons. Finally, for Anxiety boys and girls were approximately equally likely to obtain the higher mean score, but mothers reported that girls were likely to show some behaviours frequently while boys showed other behaviours frequently.

Conclusion

While a few significant differences between boys and girls within ethnic groups were obtained when subscale scores were used in the analysis, entering items as variables greatly clarified the discrimination. Three of the four groups reported gender-related differences in expression of some combination of Happiness, Anger and Anxiety,

although actual ethnic groups for whom gender-related differences were found varied for each emotion. Only one ethnic group, the Hong Kong Chinese, also reported gender-related differences in expression of Sadness.

Differences Between Younger and Older children, Within Ethnic Groups

The third hypothesis stated that younger children and older children within each ethnic group would express their emotions differently. For the purposes of this comparison children were described as "Younger" if they were aged 5.0 to 6.99 years, and "Older" if the were above 7 years in age. As with Hypotheses 1 and 2, there was a marked loss of information about real relationships between the items and underlying variables when items were summed together. This can be seen in Table 26 which shows the percentage of correct classifications when variables were subscale scores or item scores. All classification rates are satisfactory, being more than 25% above chance (Hair et al., 1998) but it is evident that where items are entered as variables correct classification is greatly enhanced.

Table 26

Percentage of Correct Predictions of Child's Age Within Ethnic Groups for Four Emotions

Emotion	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Subscale scores as variables				
Happiness	59.5	73.3	60.6	52.6
Sadness	51.4	66.7	60.6	55.3
Anger	59.5	73.3	63.6	55.3
Anxiety	64.9	80.0	60.6	55.3
Items as variables				
Happiness	100	100	100	100
Sadness	100	100	100	100
Anger	100	100	100	100
Anxiety	100	85.7	100	97

a. Anglo-A = Anglo-Australian

The increase in discrimination which occurs when items are used in the analysis can be seen in the following two tables, Table 27, which shows the result when scores for all items are summed and tested for significance, and Table 28, which shows the results when items are entered individually into the discriminant function analysis. Table 27 shows only one significant difference between younger and older children, a difference within the Anglo-Australian ethnic group for Anxiety, while Table 28 reveals many more significant differences.

Table 27

Differences Between Younger and Older Children Within Ethnic Groups, Using

Subscale Scores

Emotion	Ethnic group			
	A-Aust[a]	Indian	Chinese	Turkish
Happiness				
χ^2	0.22	0.53	0.15	0.28
Sadness				
χ^2	0.46	1.27	0.00	0.11
Anger				
χ^2	0.49	0.24	0.36	0.14
Anxiety				
χ^2	5.03[*]	0.67	0.22	2.50

Note: df = 1 throughout
a.   Anglo-A = Anglo-Australian
* $p < .05$

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Table 28

Differences Between Younger and Older Children Within Ethnic Groups, Items as Discriminants

Emotion	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Happiness				
χ^2	66.08****	29.71**	52.51**	59.07***
df	29	13	27	30
Sadness				
χ^2	36.60	14.88	42.29*	30.85
df	27	12	27	26
Anger				
χ^2	34.44	9.93	45.57*	81.29****
df	28	13	30	33
Anxiety				
χ^2	92.38****	8.42	46.98**	36.57
df	28	11	27	31

Note. Only questionnaires without missing items included in analysis when items entered as variables, so df vary for different emotions within ethnic groups.
a. Anglo-A = Anglo-Australian
*p < .05   **p < .01   ***p < .001   ****p < .0001

Hypothesis 3 was, however, only partially confirmed even when items were entered separately as variables. As can be seen in Table 28 age-related differences were significant for all emotions for Chinese children. In contrast, there were significant differences for only some emotions for the remaining three groups.

For Happiness and Anxiety, Hong Kong Chinese mothers reported that older children showed about two-thirds of the behaviours listed more frequently than younger children did. Sadness revealed a different pattern. Younger and older children obtained the higher mean score with about equal frequency. This pattern suggests mothers perceived their younger and older children expressing their sadness in different ways, with younger children showing some behaviours more frequently, and older children showing other behaviours more frequently.

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Consideration of mean scores for younger and older children within each ethnic group showed where differences occurred (See Appendices N1 to N4 for examples). For Happiness among Anglo-Australians, for example, mothers reported that their older children showed Happiness more often than younger children, this being reflected in the higher mean scores of older children on 19 of the 31 items. For Anxiety the reverse was found, with mothers reporting more frequent anxiety-related behaviours on the part of their younger children who obtained higher mean scores than their older peers on 28 of the 31 items.

Chinese mothers' responses to the Anger subscale were different again. In this instance younger children obtained the higher mean score much more often, reaching a total of 29 out of 42 possible higher scores. Where older children had the higher mean scores they were reported to show verbal aggression (e.g., Calls others rude names) more often than physical aggression (e.g., Pushes, pinches or smacks other person).

Like the Chinese mothers, Indian mothers reported seeing Happiness more often in their older children than in younger children, with older children having higher mean scores than younger children on 22 of 31 items on this subscale. Younger children tended to have higher mean scores on items indicative of rather undirected expression of Happiness (e.g., Shouts or screams with pleasure; Jumps or hops around). There were no age-related differences for the negative emotions for this ethnic group.

As shown in Table 28, above, Turkish mothers reported age-related differences in Happiness and Anger. Older and younger children were reported as showing Happiness about equally as often, but the pattern of behaviours was different, with younger children showing some behaviours more often while older children showed others with higher frequency. However, younger Turkish children reportedly showed Anger more often than older Turkish children, younger children obtaining higher mean scores on 25 of 42 Anger items.

<u>Conclusion</u>

There were relatively few within-ethnic-group differences between younger and older children in the frequency with which behaviours indicative of emotion occurred. Only for Happiness were age-related differences in expression of emotion reported by all groups. Hong Kong Chinese women reported age-related differences in expression of Sadness and were also the only ethnic group who reported age-related differences in expression for all four emotions.

Expression of Negative Emotion

Hypothesis 4 stated that Turkish, Indian and Chinese children would show fewer behaviours associated with Sadness, Anger and Anxiety than would Anglo-Australian children, as such a finding would be consistent with the maintenance of group harmony which is valued among collectivist societies.

Percentages of negative behaviours overall were as shown in Tables 29. This hypothesis was not confirmed although Indian and Turkish showed fewer behaviours indicative of Anger and Sadness than Anglo-Australian children. Indian children were also reported as showing less Anxiety. Anglo-Australian and Chinese children reportedly showed about the same percentage of negative emotions out of the possible maximum for each emotion.

Table 29

<u>Negative Emotional Behaviours as Percentage of All Possible Behaviours on Each</u>
<u>Subscale</u>

Emotion	Ethnic group			
	Anglo-A[a]	Indian	Chinese	Turkish
Sadness	61.86	49.77	63.97	54.78
Anger	60.88	37.50	59.24	48.87
Anxiety	49.87	43.35	56.30	52.89

a. Anglo-A = Anglo-Australian

Mothers' Concern/Worry About Emotional Expression

Hypothesis 5 predicted that immigrant mothers would show more concern about their children's expression of emotion than Anglo-Australians. Significant between group differences in extent of worry/concern were obtained as can be seen in Table 30, but the hypothesis was not confirmed as immigrant mothers did not consistently show more concern than Anglo-Australian mothers. Mean scores for subscales (shown in Appendices O1 to O4) revealed that Anglo-Australian mothers consistently reported more concern about their children's expression of emotion than Turkish women. For Anger Worry and Sadness Worry Anglo-Australians also worried more than Indian women. Although Chinese women were most likely overall to report the highest levels of concern/worry, even they obtained lower scores than Anglo-Australians for Anxiety Worry.

Table 30

Between Ethnic Group Differences in Maternal Worry, Using Subscale Scores

Emotion	Ethnic group				
	Anglo-A[a]	Indian	Chinese	Turkish	χ^2
Happiness Worry					
M	51.06	85.00	89.33	41.47	22.74**
SD	19.91	73.19	69.77	11.98	
Sadness Worry					
M	102.72	64.40	107.64	73.66	17.02*
SD	45.39	36.94	53.67	36.81	
Anger Worry					
M	192.08	123.67	196.82	129.84	22.94**
SD	66.68	85.66	81.56	64.32	
Anxiety Worry					
M	133.19	97.87	134.21	79.47	26.49**
SD	44.70	62.27	62.91	38.06	

Note: df = 3 throughout
a. Anglo-A = Anglo-Australian
* $p < .001$ ** $p < .0001$

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Although the hypothesis was not confirmed further analysis was undertaken to investigate the patterns of results which had contributed to the finding that ethnic groups did differ significantly in the extent of maternal worry. Accuracy in prediction of ethnic group membership improved from around 40% - 45% with subscale scores to 75% - 90% when items were entered as variables in the discriminant function analysis. Therefore, items rather than subscale scores were used in further analysis.

Highest pooled within group correlations with each of the first two functions were more likely to be in the moderate range for all subscales measuring worry about emotions. For Function 1 for all subscales, the first several items had correlations in the range 0.3 to 0.5 with the function. This was also true for those items with highest pooled within group correlations with Function 2. These results show that there was less variability in mothers' response patterns when they were indicating how much they worried about their children's emotional expression, than there had been when they were reporting how often their children showed each behaviour.

Happiness Worry

For Happiness Worry, 29 of the 31 items on the subscale had highest pooled within group correlations with Function 1. This function explained 40.9% of the between groups variance. Turkish and Anglo-Australian mothers had generally lower mean scores on items on this function than Indian and Chinese women.

Just two items, Item 23 (Pretends to fight others) and Item 09 (Jumps over furniture or runs about inside the house) contributed most heavily to Function 2 which explained 37.6% of the variance. Chinese women worried most about their children pretending to fight others, and Turkish women least. Anglo-Australian women and Chinese women obtained high scores for worry about their children jumping on furniture or running around inside the house. (Mean scores for items can be seen in Appendix 01.)

Inclusion of the demographic variables, Mother's Age and Mother's Education, in the discriminant function analysis changed the results in several ways. Mother's Age was the item with the highest correlation with Function 1 and only five items (Items 03, 04, 06, 09 and 31) from the Happiness Worry subscale had highest correlations with this

function, in contrast to 29 items when demographic characteristics were not included, thus inclusion of demographic data greatly clarified which items contributed most towards explaining between group variance (See Appendix P1). The percentage of between-groups variance explained by Function 1 also changed markedly, increasing by 12.7%. Mother's Education did not contribute much to understanding between group differences in the expression of happiness, having its highest correlation with Function 3. It is evident that the addition of demographic variables to the analysis did not change the broad pattern of results. For both Function 1 and Function 2 Indian women were still shown to obtain the highest mean scores and Turkish women the lowest. As the association between Mother's Age and Worry was also found for the remaining three emotions it is discussed in greater detail at the end of this section of the chapter.

Sadness Worry

Fifteen items, those with highest pooled within group correlations with the first two functions contributed much towards explaining the total of 80.4% of the between group variance. Three of these items were associated with Function 2. Two of these items can be described as measuring attempts to manage sadness, were Item 20 (Does something to distract him/herself), and Item 11 (Wants to be close to parent without cuddling) while the third (Item 09 - Closes lips tightly or mouth turns down at corners) might also represent an attempt at control. Table 31 shows details.

Table 31

Items With Highest Pooled Within Group Correlations With Sadness Worry

Function	Items with highest pooled within group correlation
1	Says "You make me feel bad" or similar; Speaks rudely or calls others names; Stays silent; Repeatedly asks for things; Pulls away from hugs or other touch; Sits, doing nothing; Doesn't talk much, gives short answers; Shoulders slump or droop; Walks or moves slowly; Says "I'm not happy" or "I'm sad"; Lies on bed, head and body completely covered; Eyes lacklustre or dull.
2	Does something to distract himself/herself e.g reads book, falls asleep; Closes lips tightly or mouth turns down at corners; Wants to be close to parent without cuddling.

As outlined above, Chinese women consistently expressed more concern about their children's expression of Sadness, than the other three ethnic groups. This was reflected in their high mean scores on all items which had highest pooled within group correlations with each of the three functions derived in this analysis.These results are detailed in Appendix O2. Turkish women, who consistently worried least about their children's expression of sadness, obtained the lowest mean scores on almost all items with highest correlations with both Functions 1 and 2.

When demographic characteristics were included in the discriminant function analysis results for Sadness Worry were changed only slightly (See Appendix P2). Mother's Age was again the item with the highest pooled within group correlation with Function 1, but other items with high correlations with this function remained almost unchanged. Inclusion on Mother's Age as an item in the analysis did, however, increase by 12.6% the percentage of between group variance explained by Function 1. Mother's Education contributed little towards explaining the variance between groups, correlating most highly with Function 3.

Again the inclusion of demographic variables did not alter the general pattern of results for Function 1, although there were some changes in relation to Function 2 where

Anglo-Australians were now more likely than Chinese to obtain highest mean scores for items correlating with the function. Indian women were also less likely than Turkish women to have lowest mean scores for items which correlated highly with Function 2, again a reverse of the earlier analysis in which demographic variables had not been included.

Anger Worry

As can be seen in Table 32, below, a total of 14 items had highest correlations with Function 1. These items consisted primarily of moderate physical and verbal indicators of anger (e.g., Shouts or speaks loudly; Clenches teeth; Eyes go red).

Table 32

Items With Highest Pooled Within Group Correlations for Anger Worry

Function	Items with highest pooled within group correlations
1	Shouts or speaks loudly; Threatens to hurt others; Gets into physical fights; Rejects attempts to find a solution to the problem; Cries quietly with anger; Hurts self e.g., Pulls own hair, pinches self; Stamps foot or walks with very heavy step; Eyes go red; Says "You don't love me" or similar; Clenches teeth; Goes off to bedroom; Closes lips tightly; Says "I hate you" or something similar; Cuddles soft toy, pillow or something similar.
2	Speaks more quickly than usual; Says "I'm really angry" or "I'm mad"; Pushes, pinches or smacks other person; Sits on sofa; Distracts himself/ herself with other activity e.g., drawing; Looks down; Voice gets higher.

Anglo-Australian women obtained the highest mean scores on 8 of the 14 items with Chinese obtaining the highest mean scores on the other 6 items. Turkish women showed the lowest mean scores overall with Indian women also having low mean scores on some items. For several of these items the difference in the mean scores was very marked, for example, Item 40 - Gets into physical fights. On this item Anglo-Australians obtained a mean score of 7.25 (with a possible maximum of 9), Indian and

Turkish mothers obtained mean Worry scores of 2.79 and 2.70 and Chinese mothers, a score of 5.61. Other items which showed similarly wide ranging scores were Item 04 (Threatens to hurt others), and Item 35 (Hurts self). (See Appendix O3 for item means). In all, this function explained 43.7% of the variance between ethnic groups in concern about anger.

The seven items contributing most to Function 2, which explained a further 40.9% of the variance, included several coping strategies (e.g., Sits on sofa; Says "I'm really angry"). Chinese women obtained the highest mean scores on this function, and Turkish women the lowest. Variations between groups on any particular item were less marked for these items.

The number of Anger Worry items with highest pooled within group correlation with Function 1 decreased when demographic variables were included in the analysis, with just nine emotion-related items, together with Mother's Age having highest pooled within group correlations with the function (See Appendix P3 for details). In addition, the inclusion of Mother's Age in the analysis added 16.5% towards the between group variance in levels of worry/concern about children's expression of anger explained by Function 1. Once again, Mother's Education correlated most highly with Function 3, explaining little of the between-groups variance.

The additional explanatory value of Function 1 when demographic variables were included revealed that Anglo-Australian and Chinese women's patterns of worry were more similar than had previously been evident. These two groups of women were equally likely to show high levels of concern about behaviours which correlated highly with Function 1, Indian women were consistently next most likely to worry about the same behaviours while Turkish women reported the lowest levels of worry about those behaviours with high correlations with Function 1.

For those behaviours described in items which had the highest correlations with Function 2 there was evidence of a tendency toward extreme responses on the part of Anglo-Australian women, claiming that they worried about some Anger behaviours

very frequently and about others very infrequently. The Chinese women most consistently obtained high mean scores for these items, confirming their pattern of reporting a great deal of concern about all aspects of their child's expression of emotion.

Anxiety Worry

A mixed group of 20 items had highest pooled within group correlations with Function 1 for Anxiety Worry as is shown in Table 33. These items contributed most of the 43.3% of between group variance in concern about children's anxiety which was explained by this function. The Hong Kong Chinese women obtained the highest mean scores on most of these items, followed closely by Anglo-Australians, with Turkish women obtaining the lowest scores (See Appendix O4 for item mean scores). A further eight items showed highest within groups pooled correlations with Function 2. Anglo-Australian mothers worried most about this mix of non-verbal and attention-seeking behaviours, having the highest mean scores for all items on this function. Function 2 explained 35.4% of the between groups variance in maternal concern about children's anxiety.

Table 33

Items With Highest Pooled Within Group Correlations With Anxiety Worry

Function	Items with highest pooled within group correlations
1	Cannot concentrate; Awake during the night thinking about feared event; Refuses to do feared activity; Closes lips tightly; Doesn't look at people, avoids eye contact; Sad or tense look about face; Sits close to parent, but does not cling; Says "I'm worried/frightened about.."; Asks repeatedly about feared event; Says "I can't do it" or "I won't do it"; Tries to delay or avoid feared event; Fiddles with things; Does something to distract himself/herself e.g.,Plays, watches TV; Hugs or clings to parent; Breathes quickly; Seeks extra hugs; Cries; Is restless; Cuddles soft toy or blanket; Speaks softly.
2	Says "I'm not feeling well" or "I have a stomach ache" or similar; Shoulders slump; Stays silent; Complains of dreams concerning feared event; Does nothing; Deliberately annoys others; Goes pale, Asks someone to help copewith the situation.

In contrast to the other three Worry analyses, inclusion of demographic variables to the discriminant function analysis for Anxiety Worry added items to the group which had highest pooled within group correlations with Function 1 as can be seen in Appendix P4. Six of the extra items (Items 07, 09, 11, 15, 22, and 26) had had highest correlations with Function 2 in the earlier analysis, and one (Item 12 - Muscles tense) had correlated most highly with Function 3. Mothers' Age had the highest of all correlations with Function 1, while in this instance Mother's Education correlated highly with Function 2. It was the only variable with highest pooled within group correlation with the function. As previously, inclusion of these demographic variables increased the extent to which Function 1 explained between groups variance, in this instance increasing the amount by 10.6%.

As with Anger Worry, inclusion of the demographic variables in the analysis showed Anglo-Australians and Chinese to be more alike in the extent of concern they reported than had previously been evident. But the general pattern of high mean scores for these two ethnic groups, lower scores for Indian women and the lowest mean scores of all for Turkish women was confirmed.

Cross-validation of Results

Cross-validation of results showing between-group differences in maternal worry about children's emotional expression was obtained using the split samples technique. Use of this technique showed that, although there was a reduction in accuracy of prediction overall, the results obtained remained satisfactorily high. An average of over 60% of the complete sample were correctly placed for maternal concern about the four emotions. As noted in relation to between-ethnic-groups differences in expression of emotion, this result was obtained despite the fact that the sample was smaller than optimum for use of this procedure.

Mother's Age and Worry

The results provide some evidence that older mothers worried more about all four emotions investigated. But in order to assess the relationship between Mother's Age and Worry the significant between-group differences in maternal age were also considered. As noted earlier, Anglo-Australian and Chinese mothers were significantly older than Indian and Turkish mothers, and Indian mothers were also significantly older than the Turkish women. If Worry was strongly correlated with age, the mean Worry subscale scores presented in Table 30 would show the same pattern with Anglo-Australians and Chinese consistently obtaining mean scores higher than those of Indian and Turkish women and Indian women obtaining higher scores than Turkish women. This was not the case. When differences observed were taken into account there was clear evidence of some significant correlation between Mother's Age and Worry but the degree that is unique to the relationship between these two variables only is confounded by other cultural differences that are not immediately obvious (e.g., factors determining age at child-bearing) and which are beyond the scope of the present study.

Conclusion

It is evident that there were marked differences in the extent to which women from the different ethnic groups expressed concern or worry about their child's expression of emotion. A general pattern in which Chinese mothers expressed most concern, followed closely by Anglo-Australian, then Indian and, as those who worried least, Turkish mothers, is apparent. Including mother's age as a variable increased the extent to which the first function explained between group variance, but mother's education contributed little explanatory value. In general, the addition of these two variables did not alter the pattern of results obtained when analyses omitted these demographic characteristics.

CHAPTER 8: DISCUSSION

The study looked at the emotion-related behaviours of 5- to 8-year-old children as perceived by mothers in the everyday environment of their family. Both within- and between-ethnic-group differences were expected. The question of whether children of immigrants, all of whom came from collectivist cultures, showed fewer behaviours when expressing negative emotions was also investigated. Finally, the possibility that migrant mothers were more concerned about their children's emotion-related behaviours than locally born mothers was considered.

Differences between ethnic groups in mothers' reports concerning their children's expression of emotion were significant for the four emotions - happiness, sadness, anger and anxiety - which were measured using the Children's Emotions Questionnaire when items were entered as variables in the analysis. The increase in successful prediction of group membership when items were variables over results when scale totals were used in the analysis supports Lester and Brazelton's (1982) argument that there is a loss of information when scale totals are used in cross-cultural studies. Scale totals may conceal genuine differences. (Since this is true for all analyses, the whole of this discussion focuses on results obtained with items as variables).

Differences within ethnic groups were also significant with boys and girls expressing some emotions differently from each other. This difference was sometimes in the frequency with which certain behaviours occurred, as was the situation, for example, for Anglo-Australian children's expression of Happiness and Indian children's expression of Sadness. Alternatively, boys and girls showed a number of behaviours about equally frequently but expressed their emotions through different behaviours (e.g., Chinese children's expression of Happiness; Turkish children's expression of Anxiety).

Age-related differences within ethnic groups were less common but some were still significant. Again, differences reflected different patterns of response between younger and older children. Thus, for example, older Anglo-Australian, Indian and Chinese children showed Happiness behaviours more frequently than younger children in their

ethnic group. Only Chinese children's expression of Sadness revealed a pattern where younger and older children were equal in frequency of expression but showed this emotion through different behaviours.

Although there were significant between-group differences in the extent to which mothers were concerned/worried about their children's emotion-related behaviours there was no consistent pattern of response to indicate that being a migrant mother resident in Australia was associated with higher levels of concern about this aspect of children's development. Both Indian and Hong Kong Chinese mothers did worry more about almost all Happiness behaviours than Anglo-Australian mothers but their concerns about the other emotions studied were either about the same or less than those of locally born mothers.

To summarise, between-ethnic-group differences were obtained for all emotions for both children's expression of emotion and mother's concern about it while within-group gender- and age-related differences were less general. In particular, there were very few age-related differences in children's expression of emotion. There was no evidence that immigrant children showed fewer negative emotional behaviours, or that immigrant mothers generally worried more than locally born mothers. These results will now be considered in more detail with reference to what is already known about emotional development in the four ethnic groups under consideration. This will be followed by consideration of other factors, such as features of culture not specifically related to emotion, demographic characteristics of the sample and methodology of the present study, all of which might have influenced the results. Although such influences appear not to have had much impact in the present study they may limit the extent to which findings can be generalised. Finally, general conclusions will be presented.

BETWEEN-ETHNIC-GROUP DIFFERENCES IN CHILDREN'S EMOTION

As predicted in Hypothesis 1, and noted above, differences between ethnic groups were significant for all emotions when items were entered as variables, but the degree of overlap in the standard deviations for items suggests differences were not substantial. On the other hand, it is probable that the overall effect of many small significant differences is reflected in observable differences in the frequency and intensity of emotional expression in everyday life.

Between-ethnic-group differences could have arisen as a result of parenting practices in the children's early years. Chinese and Indian women, teaching early regulation of emotion as is normative in their culture of origin, might have had children who had learnt to control emotions during their pre-school years. Anglo-Australian women, with later timetables, and Turkish women, with greater acceptance of natural timetables, might have children who showed emotions much more frequently. However, mean scores show that this was not the case. Instead, patterns of response differed according to both ethnic group and emotion. The clearest pattern was obtained for Happiness. Chinese and Anglo-Australian women reported seeing most behaviours indicative of this emotion on almost a daily basis. Indian women reported the next highest frequencies with some behaviours seen daily and others about once a week on average. Turkish women reported seeing behaviours indicative of Happiness slightly less frequently than any other groups.

Differences in reports about Happiness suggest, more strongly than any other, that there were cultural differences in the extent to which mothers of different ethnic groups paid close attention to their children's emotional behaviours. It is clear that mothers would be pleased to witness indications of Happiness on the part of their children and that these normally developing children would show such behaviours frequently. Mothers' reports are unlikely to have been consciously censored. The finding confirms the need to include at least one positive emotion in investigations in this field, a common practice but not one that is always adhered to. Inclusion of positive emotions could help researchers determine the likelihood that participants are filtering out information when describing their children's expression of more negative behaviours.

The pattern for the three negative emotions was less clear. As might be expected, these behaviours were reported as occurring less frequently than those indicative of happiness, with average occurrence around once or twice a month. Chinese women reported seeing behaviours indicative of each of these behaviours more frequently than women from the remaining ethnic groups.

It was notable that for all three negative emotions the Turkish women were more likely to report seeing physiological indicators of emotion (e.g., Face gets red, Eyes lacklustre or dull) frequently, while noting indicators of psychological stress (e.g., Deliberately annoys others) much less commonly. Researchers such as Ekman and his colleagues (e.g., Ekman, 1984, 1992; Izard, 1992) argue, as Darwin (1872/1999) did, that physiological indicators of emotion are genetically programmed. Recognition of these indicators may have survival value. It is possible that these Turkish women were alert to their children's physiological indicators of emotion for this reason, even although their cultural beliefs did not require intense involvement in their children's development.

Anglo-Australian women scored highly for verbal and physical indicators on the Anger subscale and were also least likely to report withdrawal on the part of sad children. Together with the high frequency of behaviours indicative of Happiness, these results suggest that emotions are fairly overtly expressed by Anglo-Australian children, and that strategies for minimisation of expression are not applied during early middle childhood. Such a finding is consistent with a late timetable for emotional control, as has been suggested in work by Goodnow et al. (1984), and in unpublished work by M. Ainley in Melbourne (personal communication, October, 1997).

The surprising result in this study, in view of literature emphasising cultural demands for early control of emotion, was the high rate of emotion-related behaviour reported by the Hong Kong Chinese women. This is at odds with the reports of continuity of past practices (e.g., Ho & Kang, 1984; Mak & Chan, 1995; Wu, 1996) which demand early moderation of behaviour. It suggests either that the timetable for moderation has shifted to an older age, or that the demand was no longer made by those Chinese women who participated in the present study. This latter possibility may be evidence for a shift in

parenting beliefs and practices among Hong Kong Chinese, possibly as an outcome of extended exposure to Western values and definitions of competence in that community. Certainly, there is anecdotal evidence of changes in children's behaviour, reflecting less control, among children in Hong Kong (Lee Wing On, personal communication, July, 1997). Alternatively, those parents who chose to migrate may parent differently from those who remain in Hong Kong.

Parental beliefs may also have influenced these results. Two studies of Chinese infant development, by Kagan et al. (1994) and Hsu et al. (1981), both of which looked at infant temperament, are relevant here. In the first of these studies, measures of temperament were taken, while in the second, mothers were asked to respond to a questionnaire about their child's temperament. Mothers described infants as being much more difficult temperamentally than the assessment of temperament had shown in the more objective study. Together these findings suggest that Chinese mothers characteristically describe children as responding more frequently and intensely than they are perceived as behaving when others observe and record their behaviour. The present data suggest that this maternal response set continues into middle childhood among Hong Kong Chinese. Certainly the reports are at odds with informal anecdotal reports of Australian teachers who commonly see Chinese children as showing much more emotional control than reported by their mothers. Once again, this suggests that including both observational data and mothers' reports in studies of a number of ethnic groups would give a better idea of the relationship between mothers' phenomenological experience and objective reality as measured by trained observers using standardised procedures.

The high frequency with which Hong Kong Chinese mothers reported seeing emotion-related behaviours may be an outcome of collectivist values. Kitayama and Markus (1994) suggest that mothers with such values may be more alert to undesirable behaviours. They state that where children are learning to fit in with the group, mothers may react to undesirable behaviour by commenting that the child's friends will respond adversely if they see it. These authors believe that, as a consequence, "self-evaluative schemas ... become especially sensitive and tuned not to positive but to negative self-relevant information" (p.115). Such a practice would mean that both parents and

children have greater awareness of what is considered undesirable behaviour than members of cultures where there is less focus on negative behaviours. Since expression of happiness is subject to rules about moderation, this explanation would apply to this emotion. But the argument does not account for the trend for Anglo-Australians, whose culture is individualist, also to report relatively high frequencies of expression of both positive and negative emotions. Nor does it account for the fact that Turkish and Indian women, whose cultures' are collectivist, report seeing emotion-related behaviours relatively infrequently.

More specific values and beliefs about parenting may explain the between-group differences. Thus, the high scores of the Chinese and, to a lesser extent, Anglo-Australian women may reflect the fact that these mothers live in cultures where there is considerable pressure on them to be "supermums". Both locally written books about child-rearing (e.g., Biddulph, 1997; Irwin, de Vries & Wilson, 1998) and those from overseas (e.g., Kindlon & Thompson, 1999; Shaw, 1996), which are available in Australia, emphasise the responsibility of the parent for child development outcomes through their focus on parents as agents of behaviour change. Chinese culture has traditionally emphasised that the parent is responsible for such outcomes, stating quite clearly that unsuccessful outcomes occur because of low quality parenting (Wu, 1996). To the extent that women also adhere to these cultural values they might be expected to be alert to children's behaviours and ready to intervene to modify them as required.

For this explanation to be valid, there should also be evidence that cultural ideas about maternal responsibility for child development outcomes do not pressure Turkish women or Indian women to the same degree. The previously noted acceptance among working-class Turkish women that children just grow up is consistent with less need to be highly observant of children, as is the Hindu belief that child development is at least partly the outcome of "karma", described by Roland (1988) as the influence from past lives on present circumstances. Thus, the results strongly suggest that beliefs about parental responsibility influenced reporting in this study.

One other aspect of the results is of some interest. Turkish women's responses are at odds with the little literature about emotions that exists for this ethnic group. Previous studies suggested that a holistic view of emotions was characteristic of Turkish people. If this were the sole way of viewing emotions the present task would have been culturally inappropriate and this might have been reflected in an inability to consider aspects of emotion separately. While often rather low, Turkish women's scores were by no means always the lowest. Indian women often reported seeing emotion-related behaviours even less frequently than Turkish women. The results suggest that Turkish women were making discriminations between aspects of emotion-related behaviour just as the women in the other ethnic groups were doing. Similarly, Chinese women were clearly able to discriminate between anger and sadness although some researchers (e.g., Borke, 1973) have claimed this discrimination is not well developed among the Chinese. One Chinese mother specifically indicated that she was insulted by the idea that this was not the case. Findings in relation to these two ethnic groups suggest a need for cross-cultural researchers to consider more carefully whether the research question has contributed to the responses.

Conclusion

While differences between children in the four ethnic groups almost certainly reflect differences in the ways they have learnt to express themselves emotionally, maternal reports about expression of emotion are probably also indirectly influenced by parental beliefs about the extent to which they are responsible for child development outcomes. Such beliefs may derive from traditional ideas or occur as a result of publicity about more recent discoveries in psychology and child development. Mothers who believe they are responsible for how their children develop may be more likely to observe and report higher frequencies of emotion-related behaviours, while mothers who believe they bear less responsibility may report lower frequencies of behaviours for each of the four emotions investigated in the present study.

WITHIN-ETHNIC-GROUP DIFFERENCES IN EXPRESSION OF EMOTION

The within-ethnic-group gender- and age-related differences in expression of emotion that were obtained had been predicted in Hypotheses 2 and 3, for reasons that varied between groups. For Anglo-Australians, for example, the findings from many British

and American studies in child development (e.g., Brown & Dunn, 1992; Dunn et al, 1991; Malatesta & Haviland, 1982; Tronick & Cohn, 1989) led to the prediction of gender differences. For migrant groups the traditional higher valuing of boys as compared with girls (Kandiyoti, 1977; Roland, 1988) also led to an expectation of gender-related differences. Ethnic groups differences in developmental timetables, especially a difference in when emotional control is required (Goodnow et al., 1984; Hess et al., 1980), suggested the possibility of age differences in some ethnic groups. Results are discussed in relation to the varying bases for hypotheses predicting within-group differences.

Anglo-Australians

Anglo-Australian boys were seen by their mothers as showing more behaviours indicative of happiness than girls. It is possible that a more boisterous pattern of expressing happiness on the part of boys (e.g., Shouts or screams with pleasure, Pretends to fight others) is consistent with perceptions of children in Australia as active and joking in their interactions (Dangar Research group, 1999). Girls' quieter modes of expression could be overlooked by their mothers more often. Alternatively, it is also possible that girls' expression of this emotion has begun to be regulated more than that of boys. This would be consistent with Davis' (1995) study of American children in which she found that boys were both less motivated and less skilled at regulating emotion during middle childhood.

Anglo-Australian girls and boys were equally as likely to show Anger but had different ways of expressing this emotion. For example, boys were more likely to hit or kick others or to argue or talk back while girls more often frowned, glared and stayed silent. This latter finding supports monocultural studies in the United States which have reported differences in maternal teaching about anger that vary according to their child's gender (e.g., Malatesta-Magai et al., 1994; Robinson et al., 1989). Children are likely to acquire different ways of expressing this emotion in everyday life although this only infrequently been reported (e.g., Fabes & Eisenberg, 1992), possibly because of the use of more structured approaches with a narrower focus in many other studies. Since Anglo-Australian culture is similar in many ways to that of the United States, this finding is not surprising.

In contrast to results showing differences between Anglo-Australian boys and girls for some emotions were findings for Sadness and Anxiety where no gender-related differences were obtained. These emotions generally involve more quiet, withdrawing behaviours on the part of young children than Anger and Happiness where behaviour can be loud and, at times, destructive. The lack of evidence for differences in expression of Sadness is unexpected in view of the very early ascription of certain behaviours as belonging to one gender only. Crying, for example, is something that boys claim only girls do (Clark, 1989). It is possible, perhaps, that Anglo-Australian parents tolerate similar expression of both Sadness and Anxiety irrespective of their child's gender, within the home, and only teach display rules for expressing these emotions in social situations outside the family. Alternatively, they may delay teaching gender-related ways of expressing these two emotions while they focus on the more outward manifestations of Happiness and Anger. Both of these alternatives would suggest that the developmental timetable for control of Sadness and Anxiety might be quite a lot later than that for the other two emotions investigated in this study. This possibility is supported by the lack of significant difference in expression of Sadness between younger and older children in the sample, and merits further investigation.

Younger children in this ethnic group showed Happiness less frequently, and Anxiety more frequently, than older children. These results are likely to be associated with each other since an anxious child is usually also not a happy one. The results may reflect culturally driven family pressures on Anglo-Australian children. For example, parents may have suddenly increased expectations for independence or begun demanding early competence in school-related tasks (e.g., Knowing the alphabet; Writing own name) as was found by Goodnow et al. (1984). Alternatively, a relatively later expectation for disguise of emotions may mean that young Anglo-Australian children express anxiety openly within the family setting. Although the results suggest that the increment in anxiety is only slight it may warrant further investigation in view of the destructive effects of elevated anxiety on social interaction and school learning.

<u>Indians</u>

Results show that there were few differences between boys and girls or younger and older children within this ethnic group although results need to be interpreted with caution due to the small numbers in the Indian subsample. The only significant differences obtained were that older children reportedly showed Happiness behaviours more frequently than younger children, and that girls showed Anxiety more than boys. This suggests that in these modern well-educated families there is no longer sufficient difference in the treatment of boys and girls to produce marked differences in emotional behaviours. Such a finding is consistent with the little, rather general, literature on equality of treatment of boys and girls in modern Indian families (Khatri, 1970).

Gender differences in Anxiety suggest, however, that there were some issues associated with being female in these Indian families that were sources of greater stress for girls than for boys during early middle childhood. It is possible that girls in the present study were obtaining conflicted messages about expectations for them, or that they were aware of differences in treatment as compared with brothers which they found confusing. Elevated levels of anxiety may occur during middle childhood as girls become more conscious of family practices. It would be interesting to discover whether middle-class Indian girls in general experience higher anxiety or whether it is only those who have brothers whose subtlely advantaged treatment they might be witnessing.

It is also possible that the higher anxiety of Indian girls occurs as a consequence of migration. Khatri (1970) noted that the prospect of not conforming induces anxiety in Indians. For Indian girls, the discrepancy between values and expectations within the family might be more at odds with the broad values of the majority Australian culture than it is for boys and girls might become uncertain about how best to conform. Girls of primary school age might be becoming aware of conformity issues and this could be the anxiety elicitor.

The more frequent experience of anxiety on the part of Indian girls might be of relatively short duration and little significance. In the present sample the Indian children were drawn from a non-clinical population and the Anxiety scores for Indian children as

a group were also quite low. These features of the sample and of the findings both suggest that the impact of anxiety on development might be limited in the longer term. On the other hand, anxiety of longer duration and higher intensity is likely to have negative developmental outcomes and, if found in future studies with larger samples, would require efforts towards its amelioration.

The lack of age-related differences for negative emotions suggests that the traditionally early developmental timetable for regulation of emotion (Sinha & Tripathi, 1994) has continued to influence children's learning in these well-educated middle-class Indian families, so that moderation of expression of these emotions is established before the middle childhood period. The probability that an early timetable influenced findings is increased by the fact that there were age-related differences in Happiness, an emotion about which parents are likely to have little concern. It might be expected that the developmental timetable for moderation of this emotion would be later than that for negative emotions which are more disruptive of family life and harmony.

Chinese

Unlike mothers from the other three ethnic groups, Chinese mothers reported significant differences between boys and girls, and between younger and older children for all four emotions. Boys were reported as showing Sadness, Anger and Anxiety more often than girls, and as showing Happiness in ways that differed from those of girls.

Traditionally Chinese culture has emphasised the importance of the male child and it is possible that even among these well-educated middle-class parents this cultural value was still in play. Chinese boys may respond differently to girls in the ways suggested by the findings as a result of early differentiation in parental management. However, an alternative explanation for these differences, which is also consistent with the traditional emphasis on the male child, is that Chinese participants in the study were especially attentive to the development of boys and more observant of their behaviours.

The increased demand for children to show maturity which has traditionally come suddenly at about the age of 6 years (Mak & Chan, 1995) would explain the difference between older and younger Chinese children. In particular, the cultural demand for

moderation of expression described by Wu (1982) is likely to reduce overt expression of Anger among older children. Increased demands for self-control could also result in the higher frequency of Anxiety reported for older Chinese children in this sample as they attempt to accommodate the rather sudden change in expectations.

The findings in the present study support other research (e.g., Ho & Kang, 1984) into Hong Kong Chinese child-rearing, showing evidence for continuity of long-held beliefs about how children should be raised. That these results were obtained with the well-educated Chinese women who participated in the study suggests that the cultural value for such age and gender differences in development is strong.

Turkish

Turkish mothers reported only few differences between boys and girls, younger and older children and were like the Chinese women in reporting that their children showed equal frequency of behaviours but different actual behaviours for some emotions. Specifically girls and boys were reportedly equal but different in expression of Anxiety, while younger and older children were equal but different in showing Happiness. Girls were seen as showing Happiness more often while boys and younger children showed Anger behaviours more often.

Again, these results are consistent with cultural goals for the development of girls and boys. Girls are expected to develop a conforming quiet pattern of interaction with their mothers and the girls in the study appear to have achieved this by middle-childhood. Acceptance of more dominant interactions among boys and men (Levine, 1982) would permit boys to show more anger.

Like Anglo-Australian mothers, these Turkish mothers did not report so many gender- or age-related differences for the quieter, more withdrawing behaviours associated with Sadness and Anxiety. Again, it seems likely that the disruptive effects of excessive expression of Happiness and Anger were more likely to elicit parental teaching, with less attention being given to children's expression of Sadness and Anxiety. However, this cannot be confirmed until more is known about the development of emotional expression in Turkish families.

<u>Conclusion</u>

The findings of the present study suggest that Anglo-Australian mothers, and immigrant women from India and Turkey, now resident in Australia, perceive the expression of the emotions of sadness, anger and anxiety, as measured using the Children's Emotions Questionnaire, to be relatively unchanging during the period of middle childhood while Chinese women from Hong Kong report more age-based change. The results obtained are consistent with evidence from the literature on traditional and modern child-rearing practices within each ethnic group in relation to both gender and age differences.

<u>Gender-related differences.</u> The great majority of first world studies show gender-related differences in teaching about emotion, and expression of some emotions, at an early age even although in most studies only one aspect of emotional development has been looked at. The present study, in contrast, included a wide range of components of emotional expression. Findings confirming gender-related differences in emotional expression are again fairly consistently reported, especially for happiness and anger. This suggests that gender differences may exist in many more components of emotional expression than have been investigated previously.

A possible link between gender-related differences in emotional expression and culture is in the Masculinity-Femininity dimension of culture described by Hofstede (1980). Boys in more masculine cultures might be learning modes of emotional expression required for their clearly defined male role and different from those of girls. Cultures from which the sample for the present study were selected had all obtained medium to medium-high rankings (13th to 25th from a total of 39 rankings) for Masculinity in Hofstede's (1980) study. Significant gender-related differences in emotional expression were obtained for 10 of the 16 male-female comparisons (4 emotions for 4 ethnic groups). Such results are consistent with a conclusion that cultural valuing of Masculinity, as defined by Hofstede, is associated with the development of early gender differentiation in emotional expression. Selection of a sample where Masculinity rankings showed greater separation between groups would show whether this differentiation also occurs in ethnic groups with lower masculinity scores, that is, whether gender differences in expression of emotion are likely to be universal from an early age.

Associated with such culture level differences may be gender-linked differences in teaching about display rules. In half of the instances where differences between boys and girls were significant boys showed the emotion-related behaviours more frequently than girls. Davis' (1995) study which showed that even when boys knew about display rules they were less motivated than girls to use them suggests the possibility that lower expectations for emotional control for boys may be widespread across different ethnic groups.

Age differences. As with boys and girls the pattern of significant differences between younger and older children varied according to emotion and ethnic group. The study extended these findings to broader aspects of expression of emotion than have been investigated in first world studies of children where the focus has been rather narrow.

Different timetables for emotional development may have been at work to produce these age differences. For Chinese children, there appears to be a timetable of change during early middle-childhood. In contrast, Indian women appear to see this period as one of stability, especially with regard to negative emotions for which they almost certainly have an early timetable for control. Within-group differences in reports of difference between younger and older children also suggest the possibility that timetables may be emotion specific. For example, all groups reported differences between younger and older children in the expression of happiness. These results suggest that learning to regulate expression of happiness occurs during middle childhood even in cultures where negative emotions are subject to earlier timetables for control. Clearly, more detailed investigation of emotional timetables is needed than has previously been the case. To date studies of developmental timetables have included only two or three general questions about control of negative emotions.

Cultural beliefs. Although there is sufficient information about the cultures of the four ethnic groups who participated in the study to suggest that the differences reported were genuine outcomes of early learning the possible impact of various cultural beliefs about emotion cannot be ignored. Culture is conveyed to children through

parenting via parental beliefs (Super & Harkness, 1996) and the gender and age differences obtained can also be understood in these terms. From this perspective, it appears that Chinese and Turkish mothers are operating from a generalised belief that boys and girls express their emotions differently. Anglo-Australian and Indian mothers, on the other hand, seem to hold a weaker, more restricted set of beliefs about behaviours associated with specific emotions. They may also have markedly different timetables for control of different emotions. These beliefs could have influenced both mothers' perception of emotion and their reports about it. For instance, if parents believe that there are gender-related differences in expression of emotion they may exaggerate minor variations in male and female behaviours in their reports. Similarly, ideas about how emotion is expressed at different ages could have influenced parental reporting. For example, Indian women's beliefs in early control of emotion might have meant that culturally unacceptable expressions of emotion in middle childhood were less likely to be acknowledged.

EXPRESSION OF NEGATIVE EMOTIONS

The predition made in Hypothesis 4, that immigrant children would show fewer behaviours indicative of the negative emotions, was not confirmed overall. Patterns of maternal response in regard to these emotions seem to reflect the differences in attention to emotional development in the different groups that has been mentioned earlier in the present chapter. Thus, Anglo-Australian and Chinese mothers both reported similar high levels of behaviours for negative emotions while Indians and Turks reported lower levels. It is possible that between-ethnic-group differences in expression of negative emotions is shown more in a difference in intensity of expression than in the number and frequency of behaviours shown. Investigation of this possibility would need to control for ethnic group differences in reporting, and objective measures of intensity would also be necessary.

MATERNAL CONCERN ABOUT EXPRESSION OF EMOTION

Studies of migration suggest that stressed parents might also find child-rearing stressful. This might be reflected in level of maternal concern about child development, as predicted in Hypothesis 5. But there was only one indication that immigrant women in the present sample worried more than Anglo-Australians. This related to expression of

happiness where Indian and Chinese women obtained higher scores for Happiness Worry than locally-born women. This may arise out of cultural values in relation to expression of Happiness specifically. J. A. Russell and Yik (1996), for example, cite an old Chinese proverb "le ji sheng bei" which they translate as "extreme happiness produces sorrow" and which they state is still widely quoted. For Indian women the cultural concept of the "evil eye" may influence concern about Happiness. According to Roland (1988), Indian mothers do not wish to draw attention to their child because this might arouse envy among members of the larger group. In each of these cultures an overtly very happy child might therefore be expected to be heading towards difficult times. Concern about this possibility might be elicited among Indian and Chinese mothers when their children, enculturating towards the more uninhibited expression of Happiness which is typical of Anglo-Australian children, show quite overtly when they are happy.

Apart from these concerns about Happiness there was a general lack of support for the hypothesis that immigrant mothers would show higher levels of concern about their children's emotional expression than Anglo-Australians. This suggests that acculturative stress might be low. A low level of acculturative stress might have meant that migrant mothers were not more stressed by parenting than locally-born mothers. Both Indian and Hong Kong Chinese women had had a number of experiences that are known to be associated with reduced acculturative stress. They had also lived in Australia for about the same amount of time. Turkish women who had lived in Australia for an average of over 9 years, that is, significantly longer than the Indians and Chinese and had had considerable time to acculturate. If levels of concern had reflected immigration stress Indian and Chinese women might have been expected to show similar high levels of concern about children's behaviours with Turkish women showing less than either. In fact, Indian and Turkish women showed low levels of concern while Chinese women reported high levels.

Despite the absence of a relationship between immigrant status and concern about children's emotional development the study did show that maternal concern about behaviours associated with emotions differed significantly between the four ethnic groups. There were marked differences in the percentage of respondents who said they

never worried about specific emotion-related behaviours, with Indian and Turkish women more likely to use the "Never Worry" response category than Anglo-Australians and Chinese. These differences in use of the extreme response score could indicate an unwillingness to report concerns on the part of members of some ethnic groups or they could have indicated differences in how mothers addressed the statement "How much I worry about this behaviour or would worry if I saw it".

If women worried only about behaviours which were currently in their child's repertoire there would be a higher correlation between emotion and worry than if they also worried about behaviours which their child did not display as the category "Never seen" was coded "0" for the purposes of analysis. Results of analyses using Pearson's product moment correlation did show that, for negative emotions, there were higher correlations between the Behaviour subscale scores and the Worry subscale scores of Indian and Turkish women ($r = 0.32$ to $r = 0.76$) than for the other two ethnic groups for whom there was effectively no correlation between behaviour and worry.

Where members of an ethnic group report high levels of worry but low correlation between worry and behaviour they are probably concerned about the possibility that behaviours not presently seen will occur. Anglo-Australian and Chinese women appear to have responded more in this way than Turkish and Indian women and this difference in orientation towards the question may have produced the differences between the ethnic groups.

The future orientation, sometimes seen as characteristic of the middle-class, is unlikely to represent only a class difference in the present study, since Indian women's socio-economic status was like that of Chinese and Anglo-Australians, not that of Turkish women. It is more likely to reflect ethnic group differences in beliefs about the future development of children. Some evidence for cultural differences in beliefs about children's future development can be seen in the study of Weisz et al. (1988) who found American mothers to have a weaker belief than Thai mothers that developmental problems would resolve in the future. Chinese and Anglo-Australian women in the present study seem to hold beliefs that are closer to those of the Americans in Weisz et al.'s (1988) study, possibly because they, too, are subject to cultural beliefs that child

development outcomes are a direct consequence of the quality of parenting. Where mothers are held responsible future behaviours are a concern and Worry, as measured using the CEQ, is likely to be higher.

Women from all groups failed to respond to some items measuring concern on the CEQ. Where even one possible response was missing, that person's complete set of data was omitted from the discriminant function analysis with items as variables. Because any one respondent might have omitted more than one item and in fact did so in some instances, the number of cases excluded is not a direct outcome of missing data. The percentage of cases omitted from analysis for concern about each emotion when items were variables was relatively stable for women from the three immigrant groups, with about 75% to 85% of all cases included in the analyses. More than 80% of Anglo-Australian women also presented completed protocols for worry about Happiness, Sadness and Anxiety, but only 64% of them did so for worry about Anger. The much higher number of Anglo-Australian women who presented incomplete protocols for Anger Worry suggests that these women have greater difficulty expressing concern about anger than they do expressing concern about other emotions. The finding supports the present author's impression that anger is a problematic emotion for many Anglo-Australians. The present data suggests the possibility that these mothers may deal with their concerns about the ways their children express this emotion through a process of denial.

Conclusion

While the differences between ethnic groups are significant for maternal concern about children's emotional development, there is little evidence that these differences were linked to mothers' status as locally born or immigrant to Australia. Instead, the extent to which mothers were concerned about their children's emotional expression appeared to depend on the extent to which they were worried about future events.

POSSIBLE LIMITS TO GENERALISATIONS FROM THE STUDY

The possibility that some of the between-group differences were artefacts of differences in culture which were only indirectly related to emotional expression, to differences in demographic characteristics of the four ethnic groups or the research methodology is now considered. Between-group differences in these characteristics might limit the extent to which the present results can be generalised to other samples from the same populations.

Relationship of Reports to Behaviours

Between-ethnic-group differences in the frequency with which mothers said emotion-related behaviours occurred can be explained in several ways. Firstly, by the time children reach middle childhood there are likely to be real differences in patterns of behaviour as a result of between-ethnic-group differences in parenting practices. In the present instance this suggests that between-ethnic-groups differences in the range of behaviours associated with each emotion were real. Selective reinforcement and extinction practices have been reported in both monocultural and cross-cultural research (e.g., Fivush, 1989; Malatesta & Haviland, 1982; A. L. Richman et al, 1992) for certain behaviours which have an emotional loading, and these occur from an early age. In the present study, however, behaviour was not observed directly and it was not possible to determine the actual rate of emotional behaviours on the part of the children. It was therefore also not possible to determine the accuracy of mothers' reports.

Problems with determining the accuracy of mothers' reports were increased when information about the cultures of the various ethnic groups in the study was considered. As noted elsewhere, both Indian and Chinese mothers have been described as having an early timetable for moderation of emotions (Mak & Chan, 1995; Sinha & Tripathi, 1994). This means that they teach children to regulate their emotional expression, from an early age, probably before they reach middle childhood. The low frequency of emotion-related behaviours reported by Indian mothers and outlined earlier in the chapter suggests this might have been the case for Indians in the present sample but Chinese women reported high frequencies of emotional behaviours across the range of

emotions studied. It is perhaps unlikely that both Chinese and Indian women were reporting actual behaviour frequencies and the study would have been strengthened if some observations of children from the different ethnic groups had been included.

Secondly, it is possible that differences occurred in the extent to which mothers from the four ethnic groups perceived their children's behaviours. Mothers who are very involved in a teaching role, as has been described for the Chinese (Wu, 1996), may observe more behaviours than mothers who believe, as do working-class Turkish mothers, that children just grow up rather than needing to be brought up (Kagitcibasi, 1996). Differences in reports from the Chinese and Turkish mothers in the present study could be understood as providing evidence for such differences in perception. It is possible to assess perception of behaviour even where there is no overt behavioural response by obtaining measures of autonomic nervous system reactivity. This requires laboratory work and considerable control of the environment and emotion-eliciting situation and was beyond the scope of the present study.

Thirdly, differences in the rate of reporting may have occurred. Cultural requirements not to acknowledge certain behaviours could result in reduced reporting of those behaviours even although mothers are well aware that they occur. In the present study such effects could have influenced both the reports about the frequency of behaviours and reports about concerns. It is possible that the specific demand, "How often do you see this behaviour?" and clearly defined response options (e.g., Once a month; Once a week) reduced the effect in relation to reports about behaviour. Reports about worry may have been more adversely influenced by understatement because of the more open options. Low frequencies for concern about most behaviours reported by Indian and Turkish mothers could reflect this latter effect. In contrast, the high mean scores for Hong Kong Chinese mothers for both emotional behaviours and in relation to their own levels of concern suggest that under-reporting to save "face" did not influence these Chinese women's reports, possibly because they could be returned anonymously if desired.

Conclusion

It was not possible, in the present study, to discover the relationship between the frequency with which a particular behaviour occurred, the mother's observation of that behaviour, and the accuracy of her report about its rate of occurrence. However, respondents were all adult volunteers who had chosen to participate in the study and their reports were probably intended to be an accurate representation of the reality. As shown by the low rate of missing data these mothers were motivated enough to respond carefully to the questionnaires. It seems likely, however, that mothers' reports reflected their interpretation of emotion-related events. They may have reported some behaviours as occurring more frequently and others less frequently than was the case because of the salience of that behaviour or emotion in the culture and their beliefs about what the presence of certain behaviours in their child's repertoire told about the child and about themselves as mothers. The results of the present study will therefore be of most use for researchers who are also interested in parental reports about child development.

Demographic and Acculturation Differences Between Groups

Although the Anglo-Australian, Hong Kong Chinese and Indian women were demographically alike Turkish women differed from the rest of the sample in respect to age, education and socio-economic status. Turkish women were also probably less acculturated towards living in an English-speaking community prior to their arrival in Australia than were the Hong Kong Chinese and Indian women whose home countries and cultures had both been influenced by British colonisation.

Age, Education and Socio-economic Status

The age and educational differences between Turkish women and those of the other three ethnic groups are themselves outcomes of cultural values. As Menon (1981) points out in relation to the difference between Moslem and other women in India, low educational goals and early marriage for women have been traditional values in Moslem families. Evidence from Turkey (Kandiyoti, 1982) suggests that similar goals probably continue to influence girls in more traditional families in that country, especially in relation to early marriage. Such a long-standing cultural value is likely to have been a

factor in the age at marriage of the Turkish women in the present sample, particularly as these women were not well-educated and were likely to have come from families with more traditional values.

In contrast, cultural practices among the other three groups result in much later age at marriage and hence, later child-bearing on average. Khoo and Shu (1996), for example, analysed data from Australian surveys and reported that young women in Australia showed patterns for age at marriage which differed quite markedly by ethnic group. Thus, although the median age at first marriage for all women in Australia is 25.9 years (Australian Bureau of Statistics, 1999), Khoo and Shu report that about 80% of Turkish women resident in Australia who were in the age band 20- to 24-years were already married as were about 45% of Indian women, but only 10% of Chinese women. Only about 25% of Australian-born women aged 20- to 24-years were married.

Differences in level of education and pre-migration competence in English in the sample almost certainly reflect migration policies on the part of Australian governments. Policy in place at the time when Indian and Hong Kong Chinese women in the study migrated biased the selection of migrants towards those with higher education and better English such as the Indian and Chinese women in the present sample through its emphasis on recruitment of skilled and business migrants. Although the recruitment of such migrants has been part of Australian policy since 1976, the period from 1987 to 1989 saw a much greater emphasis on recruitment of this well-educated group (Parliament of the Commonwealth of Australia, 1991) and reduction in numbers of unskilled workers who had been accepted earlier during the period when the great majority Turkish women in the sample arrived.

Such changes in migration policy mean that demographic characteristics of the sample may not be the same as those of future samples from the same ethnic groups. This is especially true for the Turkish sub-sample and the present results therefore cannot not be generalised to more recent Turkish immigrants without consideration of such issues. It is worth noting, however, that although demographically unbalanced, the sample was representative of migrant women from India, Hong Kong and Turkey who were living in Melbourne, Australia at the time of data collection (BIMPR, 1995a, 1995b, 1995c).

Associated with differences in education are differences in social class. Research into social class factors which are associated with different child-rearing practices and goals suggests that the difference between Turkish women and others in the sample could also be expected to influence child-rearing attitudes and behaviours. In particular, the widely cited work of Kohn (1969) provides evidence that blue-collar workers, such as the Turks in the present study, and white-collar workers (all other ethnic groups in the study) provide different models of competence. More specifically in relation to the present study, Miller and Sperry's (1987) study of three disadvantaged working class women and Eisenberg's (1999) study of Mexican-Americans both suggest class differences in the modelling and discussion of anger.

It is possible that these differences in age, education and social class influenced parenting in ways that could explain the differences between Turkish children and children from the other three ethnic groups in expressing emotion. However, there were also differences between Anglo-Australian, Indian and Chinese mothers' reports about children's expression of emotion. These groups did not differ significantly in socio-economic status. It is probable therefore, that the contribution of social class influences to the results was small.

Acculturation

Recent research into acculturation (e.g., Ward & Rana-Deuba, 1999) has used complex measures to determine the nature and extent of acculturation among members of various ethnic groups. Because the present study was concerned primarily with child-rearing, however, only two screening measures of acculturation were used, personal identity and English competence, and this may have placed limitations on the understanding of the relationship between acculturation and parenting.

The limited English skills of the Turkish subsample could be seen as an indication of continued acculturative stress (Berry & Annis, 1974) and certainly this group of migrants is known to show other indicators of long-term on-going stress, such as a high frequency of physical and mental health problems, especially anxiety and depression

(Minas, Szmukler, Demirsar & Eisenbruch, 1988). As in other countries where there are large numbers of Turkish migrants there is evidence that Turkish women in Australia are subject to pressures to behave in traditional ways. For example, many Turkish women participated in the present study only with their husband's express permission. Continuing the Turkish traditional lifestyle has the effect of separating children from their mothers and Turkish women who were interviewed in this study commented that they felt isolated from their children's lives because of their own lack of English. This may contribute to mental health problems.

Whether health problems reflect acculturative stress in women or more general stresses which extended beyond the migrant community (e.g., high rates of unemployment among unskilled workers generally) they may mean that the Turkish women in the study were less involved with the development of their children than either their peers who remained in Turkey or the more integrated Indian and Chinese women in the sample. Such a lack of involvement could have contributed to their relatively low scores on both Behaviour and Worry subscales of the CEQ. Future studies of migrant mothering might therefore be strengthened by screening for depression and/or anxiety, especially when the study involves a group who are known, or suspected to have, difficulties integrating with the majority culture of the host country. For comparison purposes, the inclusion of a subsample from the country of origin has also been shown to be useful (e.g., D. A. Rosenthal, Demetriou & Efklides, 1989) and would improve the quality of the findings. This was beyond the scope of the present study.

Conclusion

Demographic differences between Turkish women and women from all three other ethnic groups may have influenced findings in relation to expression of emotion although it seems that the effect of these differences would have been small. The presence of these demographic differences in the sample raises an important issue where cross-cultural studies involve work with migrant groups. While it is clearly desirable to match ethnic groups for demographic characteristics, doing so may have the effect of reducing the relevance of findings to the local community. Researchers may need to decide in advance whether they intend their findings to have more pure or more applied relevance.

Issues relating to acculturation appear to have had little effect in the present study but may warrant further investigation with reference to some groups especially where mental and physical health problems are suspected to be unusually common.

Methodology

Features of the methodology that may limit the generalisation of the present results include the method used to confirm selection of the four ethnic groups for the study, the selection of participants themselves and the use of written questionnaires. Each of these is discussed separately.

Selection of Ethnic Groups for the Sample

Selection of the sample was made on the basis of data from Hofstede (1980) with an attempt to confirm his findings using the Colindex (Chan, 1994) which is a measure of Individualism-Collectivism and provides information about culture level characteristics of the sample. Although the Colindex was useful in providing some confirmation of the basis for selection of ethnic groups for the study, the relationship of individualism-collectivism to expression of emotion has recently been shown to be more complex than previously believed. Stephan, Stephan, Saito and Barnett (1998), for example, included a measure of individual-level individualism-collectivism in their study of expression of emotion among Japanese and American university students. They discovered that individual Japanese and American students responded in ways that were not consistent with culture level expectations.

An additional difficulty was that results in the present study were to some degree inconsistent with information about the scale provided by Chan (1994). Chan obtained reliable separation of his sample into individualist and collectivist groups. In contrast, in the present study, separation was satisfactory only for items measuring collectivism. There are a number of possible reasons for this among which is the fact that the sample consisted entirely of women in their 30's unlike Chan's which included male and female university students. Women who are mothers of young children may be more "other-centred" than youthful university students, and less likely to agree with statements

that emphasise that the individual is responsible only for him/herself. Hofstede, in his 1980 work, had earlier pointed out that women were more flexible in their responses and less likely to show a fixed pattern than men from the same culture.

As predicted from Hofstede's work, Anglo-Australians in the final sample were less collective than all three migrant groups, and Indian women were less collective than Hong Kong Chinese and Turkish women. The reversal of rankings of the Chinese and Turkish women as compared with rankings obtained by Hofstede could well be related to the high education levels of the Chinese in the present sample. Research has repeatedly shown that well-educated members of collectivist cultures are more individualistic than their less well-educated peers (Hofstede, 1980; Triandis, 1995). Alternatively, the Turkish preference for remaining separate from the majority culture which has sometimes been reported (Berry, 1999) might limit the shift away from collectivism that generally occurs when members of a collectivist culture migrate to a country that is more individualistic (e.g., Bierbrauer et al., 1994; D. A. Rosenthal, Bell et al., 1989).

The durability of collective values among migrant women who had lived in Australia for an average of more than 6 years suggests that the tendency for Indian women to maintain the culture of origin values (Siddique, 1983) might be common among migrant women in general although this cannot be assumed. Acculturation of core values, such as those measured by the Colindex and similar scales, might be extremely slow in some ethnic groups and more rapid among others, this might be associated with variation in the extent to which different ethnic groups become integrated with the majority culture. Responses to questionnaires such as the Colindex could reflect these effects.

Conclusion. While the Colindex was useful in that it provided some support for the selection of ethnic groups for the study there are clearly limitations to its usefulness in the present study. Difficulties in translation of the scale might have contributed to these limitations as might the fact that many respondents were migrants, not people residing in their home country in contrast to the sample used by Chan (1994) in the development of the scale. As a screening device, however, the scale produced results similar enough to those of Hofstede and later researchers to warrant its further use.

<u>Selection of Participants</u>

All participants in the study were volunteers and this may have had the usual effect of biasing selection of participants towards those who were well-educated and highly motivated (de Vaus, 1995) and restricting the extent to which generalisations can be made (Adams & Schvaneveldt, 1991).

At the wider community level, the results may also have been influenced by the fact that all women in the sample lived in the city of Melbourne where 30% of residents were born overseas (City of Melbourne, 1999), these migrants having come from countries in all major regions of the world (Bureau of Immigration and Population Research, 1994). Many members of the majority ethnic group appear to take pride in living in such a multicultural city and appreciate the diversity of their social environment. Thus, the experiences of immigrant women in Melbourne may not be typical of immigrant women in other parts of Australia, especially those few who live in smaller towns or rural communities. In particular, this might have reduced the extent to which the women in the sample felt pressure to assimilate. Low assimilation pressure may have the effect of reducing concern about child development.

Cultural differences may have influenced participation in other ways. For example, many of the Hong Kong Chinese mothers in the sample were recruited through the minister of their church who designated a representative to recruit members of the congregation. Others were recruited by Chinese school teachers at Saturday morning schools for Chinese children. In effect, then, all Chinese women were recruited by persons of authority in the community. Traditionally, for Chinese there is an expectation that authority figures will be obeyed (Ho, 1996), so that when asked to participate women may have felt some sense of obligation to do so. This was evident early in the study when one Chinese woman, who clearly did not want to be interviewed, presented in a rather hostile manner and gave minimal answers. Her behaviour contrated markedly with that of other Chinese women who, even while occasionally struggling with the English language, made a real effort to assist.

If the Hong Kong Chinese women who completed the questionnaires were participating because of a sense of obligation it might be expected that they would have given little attention to the questionnaires and provided minimal answers. Alternatively, they might have shown an acquiescent response set. Neither of these patterns occurred. These Chinese women used the whole range of possible responses when describing both their children's behaviour and the extent to which they were concerned about it. They were also least likely to omit items of all the ethnic groups.

Turkish women who were assisted with the questionnaires might have responded differently than they would have with more privacy. Again, there is some evidence from early in the study that this was unlikely to be the case. Interviews with three Turkish women were undertaken in the presence of female friends and relations whom the respondents had invited to attend. This suggests that women were used to discussing their children's development with and in front of other members of their community.

Data in relation to how many behaviours their child showed when expressing Sadness, Anger and Anxiety, as measured using the CEQ, and how frequently they showed these behaviours (Hypothesis 4) also suggest that Turkish women were not influenced by the presence of another in terms of acknowledging that certain behaviours occurred. They described their children as showing a wider range of behaviours for all three negative emotions than Indian mothers who worked independently on the questionnaires. Also, Turkish women were no more likely than the other groups obtain the lowest mean scores for items contributing to Functions 1 and 2 (those where there were significant differences between groups) for the three negative emotions. Together, these features of their responses suggest that Turkish women were unlikely to have restricted their responses to the CEQ because they were in the presence of an assistant.

Use of Written Questionnaires

The better educated Anglo-Australian, Indian and Hong Kong Chinese women were more likely to be familiar with questionnaires and more comfortable about using them than the Turkish women in this sample. The large number of women with university qualifications were also more likely to understand the needs of researchers and to commit to the task than less well-educated women in all ethnic groups. One indicator

that unfamiliarity with the task altered outcomes might have been if there was a markedly higher rate of omission of items, or of unclear responses, among the less well-educated Turkish women but there was no evidence of such problems. Probably the fact that Turkish women were answering questionnaires in their first language and were assisted as necessary with the task negated the effect of unfamiliarity with the task.

The low rate of questionnaire return by Indian women, who held the highest educational qualifications in the sample, suggests that some factor other than task familiarity and education came into play with this ethnic group. As noted earlier in this report, Naidoo (1980) also found that Indian women do not return questionnaires unless close personal contact has been established. This may have been a factor in the present study where many Indian women were contacted by telephone.

Conclusion. It is obvious that the difficulties associated with collecting data where respondents were members of different ethnic groups increased the likelihood that group differences were artefacts of the methodology but the effect of these appears to have been small in the present study. The biases associated with volunteer samples do mean, however, that further work with a more representative selected sample is important, even if difficult to achieve.

GENERAL CONCLUSION

Despite the presence of some features of the present study which might limit the extent to which the findings will generalise, the present research supports and extends the findings of other studies into the development of emotions in cross-cultural context. Results suggesting that by middle childhood differences exist between children from different ethnic groups in the ways they express happiness, sadness, anger and anxiety are consistent with those obtained in earlier cross-cultural studies even although these are few in number.

An important feature of the study is that it extended research into emotional development away from the emphasis on facial expression of emotion and from the hypothetical situations which have been the focus of the research into the emotions in monocultural studies of middle childhood. A large number of components of behaviour,

each of which contributes to the expression of emotion in children in different ethnic groups, were considered. Emotions were those "basic" emotions, happiness, sadness, anger and anxiety, which are expressed in the regular daily environment of the family but which have only very infrequently been investigated in real situations beyond the pre-school years. Children in the middle childhood age range, especially those whose cultures require considerable control of emotional expressiveness, are probably more open in the secure context of family life than they are elsewhere since by this age they have already begun to learn that in many situations it is necessary to regulate their emotional expression in reaction to various events. Like the few monocultural studies of emotion in children's everyday lives, this cross-cultural study shows that it is possible to study emotion without always restricting the range of behaviours investigated. The advantage of such studies is that they strengthen the link between everyday conceptions of emotion and those beliefs that are incorporated into formal theory, resulting in an improved understanding of the construct itself.

A second important contribution of the present study is that it investigated expression of basic emotions among children in the middle childhood age band. The development of children in this age range is often overlooked, perhaps as a consequence of the history of psychology where, in earlier times the so-called "latency" period of middle childhood was seen one where little change occurred. Thus, as shown in research reported in Chapters 1 and 2 of this report, first world researchers have previously looked closely at emotions in infancy and the preschool years. At older ages, less relevant to the present research, there has also been some work with older adolescents and quite a lot with adults. Where research has involved work with children in the middle childhood age band the foci have been facial expression, the development of more cognitive emotions, and learning about emotional regulation, and there has been little interest in on-going development in expression of basic emotions. In developing countries psychological studies have, appropriately, had a more applied focus, so that again research into the emotional development of 5- to 8-year-old children has been rare. The few studies that have been undertaken have often been done by ex-patriate researchers, as is evident in Chapter 3 in this report. The present study suggests that there is on-going change and development in expression of basic emotions during middle childhood in some cultures

while in others expression of emotion is more constant at this time. These cultural and ethnic differences in patterns of emotional development need to be accounted for in psychological theory.

Theories about the development of emotion (e.g., S. L. Gordon, 1989; Saarni, 1990) currently explain what children learn and some (e.g., J. A. Russell, 1989) also explain that what they learn is linked to cultural definitions of emotional competence. To date, however, formal theory has not explained satisfactorily the relationship between what children learn and the context in which it is learned, nor does it explain why there are differences between cultures in when development takes place. This failure to acknowledge the importance of context occurs despite widespread recognition that learning about emotion and the practice of emotion-related behaviours in the early years occurs almost entirely during social interaction. Probably because context has not been acknowledged, formal theory has also not attempted to explain how children from various ethnic groups come to show emotional behaviours that are sometimes similar and sometimes different. It is possible that the influence of ethnotheories about emotion learning and emotional competence, and their impact on parenting practices (e.g., reinforcement, punishment, modelling), will need to be incorporated into formal theory as more knowledge becomes available.

While the present study has examined differences between and within ethnic groups it is important not to overemphasise these differences. Similarities may tell much about potential universals in emotions and should not be forgotten. In this study, for example, some similarities were that women of all ethnic groups listed many behaviours which occurred when their children were angry and few for sadness. These differences are reflected in the final number of items in questionnaires measuring the expression of each emotion. Anger, as might be expected, is evidently strongly and vividly expressed by children from all ethnic groups using a wide range of behaviours, while sadness is expressed through a much narrower range of behaviours in all ethnic groups. At least some children in each ethnic group showed each of the behaviours listed in the questionnaires. Studies looking for these and other similarities in the way children from a wider range of ethnic groups express their emotions may be useful.

More generally, the dearth of research into child development in Australia and into the child in the acculturating family is shown in the literature review. The present study shows that much can be learnt about the emotional development of children growing up in a minority group in a host culture whose definition of emotional competence differs from those of one's parents. Since about one person in every five in Australia was born overseas the actual number of families affected by this experience is indeed large and studies of emotional development in other countries, while informative, are insufficient to explain what is happening for children of immigrants in this country.

Survey studies such as the present one provide a starting point only for future research. Maternal reports obviously reflect mothers' phenomenological experience of their children and are informative at that level. The risk in these studies is that the difference between response patterns of one group and those of other groups may be beyond the usual range of variability associated with survey data. In the present instance, the consistently very high scores of the Hong Kong Chinese or the very low scores of the Turkish mothers may tell more about maternal sensitivity to or filtering out of information about children's emotional state within an ethnic group, than it does about between-group differences in frequency of particular behaviours. In this case it is difficult to see how conclusions about difference between ethnic groups can be reached without including objectively recorded observations at some point in the study. This is an important issue in cross-cultural psychology where a great deal of survey research is currently reported.

It seems unlikely that the differences reported by mothers in the present sample were merely the outcome of different styles of reporting among the four ethnic groups, however. The published literature suggests that acquiescence set effects are not found in mental health studies. Similarly, in the present study there was no evidence that respondents used a restricted range of options when answering questionnaires. Differences seem unlikely to be the result of response biases. Instead, maternal responses almost certainly describe real differences that have developed as a result of differential patterns of reinforcement and punishment for children from different ethnic

groups as they express their emotions. In particular there is likely to have been a history of differential response to the behaviours of boys and girls, in most ethnic groups. The present study strongly suggests that what children learn about expression of emotion is related to parents' cultural beliefs. How these beliefs translate into parenting practice when adults migrate about the same time they become parents requires much further investigation.

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